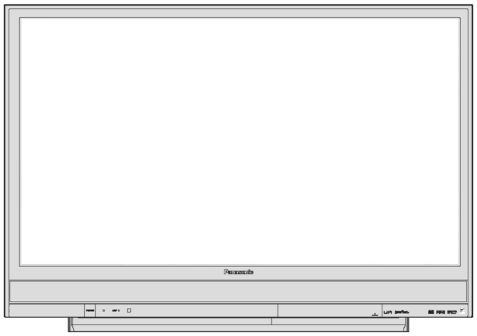
ORDER NO. MKE0706852CE

Service Manual

Multi Media Display



PbF
Solder Lead free

PT-50LCZ70
PT-56LCZ70
PT-61LCZ70
PT-50LCZ7
PT-56LCZ7
PT-61LCZ7
PT-50LCZ70-K
PT-56LCZ70-K
PT-61LCZ70-K

Vol. 1

⚠ WARNING

This service information is designed for experienced repair technicians only and is not designed for use by the general public. It does not contain warnings or cautions to advise non-technical individuals of potential dangers in attempting to service a product. Products powered by electricity should be serviced or repaired only by experienced professional technicians. Any attempt to service or repair the product or products dealt with in this service information by anyone else could result in serious injury or death.

Panasonic®

© 2007 Panasonic Shikoku Electronics Co., Ltd. All rights reserved. Unauthorized copying and distribution is a violation of law.

CONTENTS

Page

- **1 Safety Precautions ---------- 3**
  - 1.1. General Guidelines ---------- 3
  - 1.2. Leakage Current Cold Check ---------- 3
  - 1.3. Leakage Current Hot Check ---------- 3
  - 1.4. Disposal Lamp ---------- 3
- **2 Warning ---------- 4**
  - 2.1. Prevention of Electro Static Discharge (ESD) to Electrostatically Sensitive (ES) Devices ---------- 4
- **3 Service Navigation ---------- 5**
  - 3.1. Introduction ---------- 5
  - 3.2. About Lead Free Solder (PbF) ---------- 5
- **4 Specifications ---------- 6**
- **5 Service Mode ---------- 7**
- **6 Troubleshooting Guide ---------- 19**
  - 6.1. Troubleshooting Hints for Block Level Repair ---------- 19
- **7 Disassembly and Assembly Instructions ---------- 33**
  - 7.1. Cabinet Section ---------- 33
- **8 Measurements and Adjustments ---------- 54**
  - 8.1. Adjustment Procedures 1 ---------- 54
- **9 Maintenance ---------- 57**
  - 9.1. Cleaning Methods ---------- 57
- **10 Voltage Chart and Waveform of Connectors ---------- 58**
- **11 Block Diagrams ---------- 61**
- **12 Schematic Diagrams ---------- 63**
  - 12.1. SCHEMATIC DIAGRAM & CIRCUIT BOARD LAYOUT NOTES ---------- 63
  - 12.2. INTERCONNECTION SCHEMATIC DIAGRAM ---------- 64
  - 12.3. POWER SCHEMATIC DIAGRAMS ---------- 65
  - 12.4. SD/HDMI SCHEMATIC DIAGRAM ---------- 66
  - 12.5. REAR JACK SCHEMATIC DIAGRAM ---------- 67
  - 12.6. FRONT JACK/OPERATION / POWER SWITCH / TUNER SCHEMATIC DIAGRAM ---------- 72
- **13 Printed Circuit Board ---------- 73**
  - 13.1. POWER P.C.B. ---------- 73
  - 13.2. SD/HDMI P.C.B. ---------- 74
  - 13.3. REAR JACK P.C.B. ---------- 75
  - 13.4. FRONT JACK/OPERATION P.C.B. / TUNER P.C.B. / POWER SWITCH/OPERATION P.C.B. ---------- 76
- **14 Exploded Views ---------- 77**
  - 14.1. MAIN PARTS SECTION ---------- 77
  - 14.2. BASE BODY SECTION ---------- 79
  - 14.3. DISPLAY SECTION ---------- 80
  - 14.4. SCREEN SECTION ---------- 82
  - 14.5. OPT/TV UNIT SECTION ---------- 84
  - 14.6. LAMP UNIT SECTION ---------- 85
  - 14.7. PACKING PARTS AND ACCESSORIES SECTION ---------- 86
- **15 Replacement Parts List ---------- 87**
  - 15.1. REPLACEMENT NOTES ---------- 87
  - 15.2. MECHANICAL REPLACEMENT PARTS LIST ---------- 88
  - 15.3. ELECTRICAL REPLACEMENT PARTS LIST ---------- 89
- **16 Schematic Diagrams for Printing with Letter Size ---------- 95**

1 Safety Precautions

1.1. General Guidelines

1. For continued safety, no modification of any circuit should be attempted.
2. Disconnect AC Plug before disassembling this unit.
3. It is advisable to use an isolation transformer in the AC supply before servicing.
4. When servicing, observe the original lead dress. If a short circuit is found, replace all parts which have been overheated or damaged by the short circuit.
5. After servicing, see to it that all the protective devices such as insulation barriers, insulation papers, shield, and isolation R-C combinations etc. are properly installed.
6. After servicing, be sure to restore the wires, leads, insulation barriers, shields, etc.
7. After servicing, make the leakage current checks to prevent the customer from being exposed to shock hazards.

Caution:

Use a separate Isolation Transformer for this unit when servicing.

1.2. Leakage Current Cold Check

1. Unplug the AC cord and connect a jumper between the two prongs on the plug.
2. For physically operated power switches, turn power on. Otherwise skip step 2.
3. Measure the resistance value, with an ohmmeter, between the jumpered AC plug and each exposed metallic cabinet part on the receiver, such as screwheads, connectors, etc. When the exposed metallic part has a return path to the chassis, the reading should be between 1 MΩ and 12 MΩ. When the exposed metal does not have a return path to the chassis, the reading must be infinity.

1.3. Leakage Current Hot Check

1. Plug the AC cord directly into the AC outlet.

   Do not use an isolation transformer for this check.
2. Connect "A" to exposed metallic part on the set. And connect "B" to a good earth ground, as shown in Figure 1.
3. Use an AC voltmeter, with 1 kΩ/V or more sensitivity, to measure the potential across the resistor.
4. Check each exposed metallic part, and measure the voltage at each point.
5. Reverse the AC plug in the AC outlet and repeat each of the above measurements.
6. The potential at any point should not exceed 0.25 V RMS.

   A leakage current tester (Simpson Model 228 equivalent) may be used to make the hot checks. Leakage current must not exceed 1/2 mA. In case a measurement is outside of the limits specified, there is a possibility of shock hazard, and the receiver should be repaired and rechecked before it is returned to the customer.

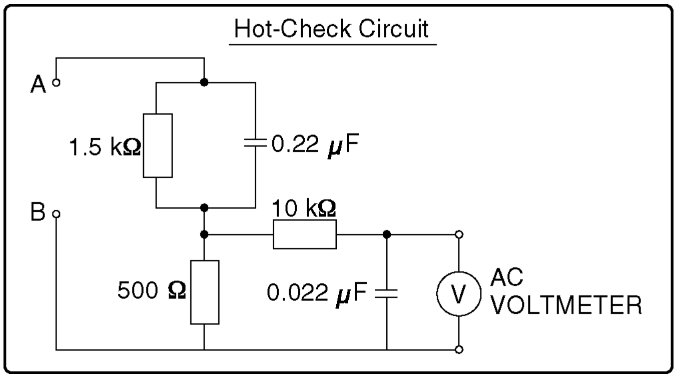


Figure 1

1.4. Disposal Lamp

This Projection Display TV has a Electrodeless Discharge Lamp that contains mercury.
Disposal may be regulated in your community due to environmental considerations.
For disposal or recycling information, please contact your local authorities, or the Electronics Industries Alliance: <http://www.eiae.org>

2 Warning

2.1. Prevention of Electro Static Discharge (ESD) to Electrostatically Sensitive (ES) Devices

Some semiconductor (solid state) devices can be damaged easily by static electricity. Such components commonly are called Electrostatically Sensitive (ES) Devices. Examples of typical ES devices are integrated circuits and some field-effect transistors and semiconductor "chip" components. The following techniques should be used to help reduce the incidence of component damage caused by electro static discharge (ESD).

1. Immediately before handling any semiconductor component or semiconductor-equipped assembly, drain off any ESD on your body by touching a known earth ground. Alternatively, obtain and wear a commercially available discharging ESD wrist strap, which should be removed for potential shock reasons prior to applying power to the unit under test.
2. After removing an electrical assembly equipped with ES devices, place the assembly on a conductive surface such as aluminum foil, to prevent electrostatic charge buildup or exposure of the assembly.
3. Use only a grounded-tip soldering iron to solder or unsolder ES devices.
4. Use only an antistatic solder removal device. Some solder removal devices not classified as "antistatic (ESD protected)" can generate electrical charge sufficient to damage ES devices.
5. Do not use freon-propelled chemicals. These can generate electrical charges sufficient to damage ES devices.
6. Do not remove a replacement ES device from its protective package until immediately before you are ready to install it. (Most replacement ES devices are packaged with leads electrically shorted together by conductive foam, aluminum foil or comparable conductive material).
7. Immediately before removing the protective material from the leads of a replacement ES device, touch the protective material to the chassis or circuit assembly into which the device will be installed.

   CAUTION :

   Be sure no power is applied to the chassis or circuit, and observe all other safety precautions.
8. Minimize bodily motions when handling unpackaged replacement ES devices. (Otherwise harmless motion such as the brushing together of your clothes fabric or the lifting of your foot from a carpeted floor can generate static electricity (ESD) sufficient to damage an ES device).

3 Service Navigation

3.1. Introduction

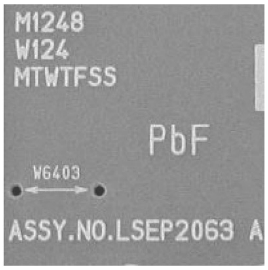
This service manual contains technical information which will allow service personnel´s to understand and service this model. Please place orders using the parts list and not the drawing reference numbers.

If the circuit is changed or modified, this information will be followed by supplement service manual to be filed with original service manual.

3.2. About Lead Free Solder (PbF)

Distinction of PbF PCB:

PCBs (manufactured) using lead free solder will have a PbF printing on the PCB.
(Please refer to figures.)



Printed case

CAUTION:

- **Pb free solder has a higher melting point than standard solder;
  Typically the melting point is 50 °F - 70 °F (30 °C - 40 °C) higher.
  Please use a soldering iron with temperature control and adjust it to 700 °F±20 °F (370 °C± 10 °C).
  In case of using high temperature soldering iron, please be carefull not to heat too long.**
- **Pb free solder will tend to splash when heated too high (about 1100 °F/600 °C).**
- **All products with the printed circuit board with PbF stamp or printing must be serviced with lead free solder.
  When soldering or unsoldering, completely remove all of the solder from the pins or solder area,
  and be sure to heat the soldering points with the lead free solder until it melts sufficiently.**

Recommendations

Recommended lead free solder composition is Sn96.5 Ag3.0 Cu0.5.

4 Specifications

ITEM		SPECIFICATION	1	2	3
Power Source		AC 120 V, 60 Hz	○	○	○
Power Consumption		Power ON: Approx. 360 W Power OFF: Approx. 0.4 W (When cooling fan is stopped)	○	○	○
LCD panels		0.74″ Poly silicon TFT LCD panel × 3 2 073 600 (1 920 ×1 080) stripe pixels × 3 panels (16:9)	○	○	○
Display		52-inch, 16 : 9 aspect ratio	○	–	–
		56-inch, 16 : 9 aspect ratio	–	○	–
		61-inch, 16 : 9 aspect ratio	–	–	○
Speaker		2 Speakers 20 W [10 W + 10 W] (10 % THD)	○	○	○
Light Source		LUXIM® LIFI™ Electrodeless RF Lamp (LFS4000)	○	○	○
Channel Capability (Digital/Analog)		VHF/UHF 2-69 Cable 1-135	○	○	○
Input Terminals	PC INPUT	RGB analog 0.7 Vp-p (75 Ω) (D-SUB 15P) AUDIO 0.5 Vrms (M3 Stereo mini Pin Jack)	○	○	○
	AV INPUT 1-3	VIDEO 1.0 Vp-p (75 Ω) (RCA Pin Jack) S-VIDEO Y: 1 Vp-p (75 Ω), C: 0.286 Vp-p (75 Ω) (Mini DIN 4 pin) AUDIO L-R 0.5 Vrms (RCA Pin Jack × 2)	○	○	○
	COMPONENT VIDEO INPUT 1-2	Y 1.0 Vp-p (with sync) (75 Ω) (Pin Jack) P_B / P_R ± 0.35 Vp-p (75 Ω) (Pin Jack × 2) AUDIO L-R 0.5 Vrms (RCA Pin Jack × 2)	○	○	○
	HDMI 1-3	HDMI type A Connector · This Projection Display supports “HDAVI Control 2” function. AUDIO L-R 0.5 Vrms (RCA Pin Jack Type × 2)	○	○	○
Card slot		SD CARD slot × 1	○	○	○
Output signals (AV OUT)		VIDEO 1.0 Vp-p (75 Ω) (RCA Pin Jack) AUDIO L-R 0.5 Vrms (RCA Pin Jack × 2)	○	○	○
Dimensions (W × H × D)		1 192 mm (W) × 836 mm (H) × 418 mm (D) 46.9″ (W) × 32.9″ (H) × 16.5″ (D)	○	–	–
		1 322 mm (W) × 923 mm (H) × 451 mm (D) 52″ (W) × 36.3″ (H) × 17.8″ (D)	–	○	–
		1 432 mm (W) × 996 mm (H) × 483 mm (D) 56.4″ (W) × 39.2″ (H) × 19″ (D)	–	–	○
Weight (Mass)		27 kg (59.5 lbs.) Net	○	–	–
		32 kg (70.5 lbs.) Net	–	○	–
		34 kg (74.9 lbs.) Net	–	–	○
Operating conditions		Temperature : 0 ˚C – 35 ˚C (32 ˚F - 95 ˚F) Humidity : 20 % – 80 % (non-condensing)	○	○	○
Solder		**This model uses lead free solder (PbF).**	○	○	○

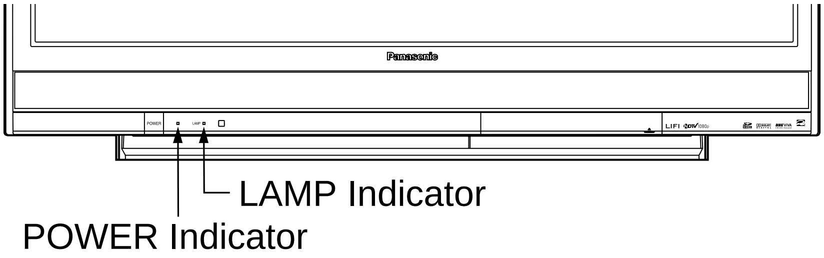
1. PT-50LCZ70/PT-50LCZ7/PT-50LCZ70-K
2. PT-56LCZ70/PT-56LCZ7/PT-56LCZ70-K
3. PT-61LCZ70/PT-61LCZ7/PT-61LCZ70-K

Design and Specifications are subject to change without notice.
Weight and Dimensions shown are approximate.

5 Service Mode

INDICATIONS FOR ERROR CONDITIONS

Each Indicator facilitates finding the cause of an error.
When an error is detected, the Lamp goes off and the indicators on the front flash.



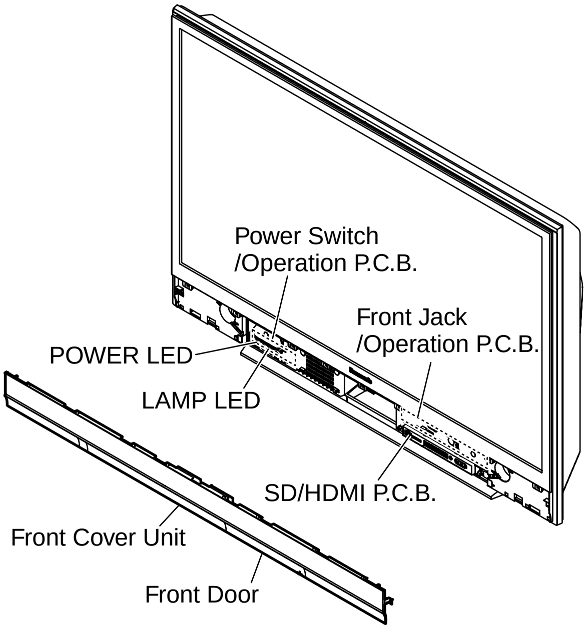
Priority	Error Information	POWER Indicator flashes orange	LAMP Indicator flashes red	SOS (Note 1)	LAMP OFF	RESET
1	Over voltage/Over current (SOS)	1	-	01	○	AC ON/OFF
2	Abnormal voltage (DTV+9V line)	2	-	02	○	
3	Abnormal voltage (SUB+5V line)	3	-	03	○	
4	Abnormal voltage (MAIN+3.3V line)	4	-	04	○	
5	IC4501 (Audio Amp) failure	6	-	06	○	
6	Communication error between Peaks (IC8001) and TV Microcontroller (IC6004)	7	-	07	○	
7	Communication error between Peaks (IC8001) and TV Microcontroller (IC6004)	9	-	09	○	
12	Lamp does not light up	-	2	02	○	Power ON/OFF
9	Lamp failure	-	3	03	○	
10	Abnormal Lamp temperature	-	4	04	○	
11	Lamp communication error	-	5	05	○ (Note 2)	
14	Lamp Fan stops	-	8	08	○	AC ON/OFF
15	Fan Case Unit (OPT Fan) stops	-	9	09	○	
16	Front Fan or Rear Fan stops	-	10	0A	○	
17	Rear Fan or Front Fan stops	-	11	0B	○	
13	Rear Jack PCB connection error	-	12	0C	○	
8	Abnormal Lamp input voltage (+26V)	-	13	0D	○	Power ON/OFF

Note:

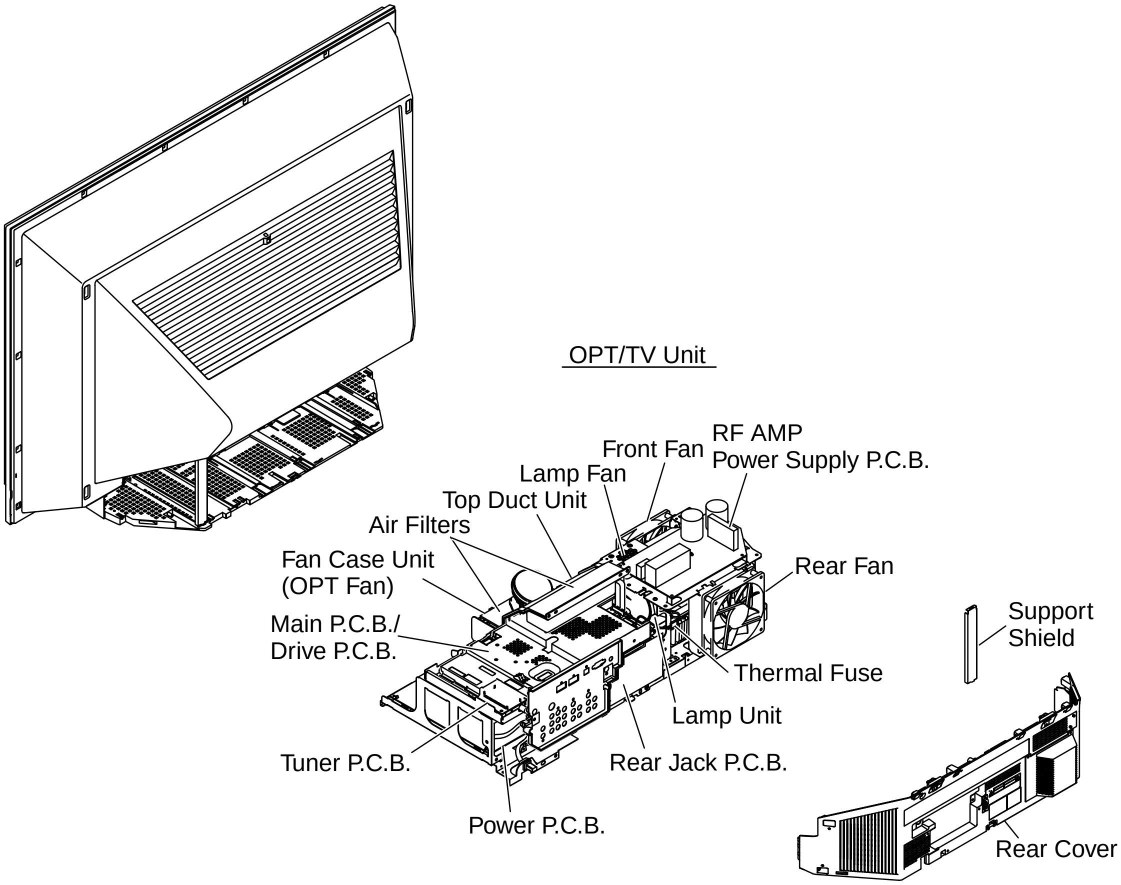
1. The detected Error data will be stored in the EEPROM, and SOS History (Code) is displayed in Self Check mode or Service Adjust mode (SRV-TOOL).
2. The Lamp Indicator will flash X5 immediately after the Lamp goes off. For this SOS only, the TV power will remain on.

MAIN PARTS LOCATION

<Front View>


Power Switch
/Operation P.C.B.
Front Jack
/Operation P.C.B.
POWER LED
LAMP LED
SD/HDMI P.C.B.
Front Cover Unit
Front Door

<Rear View>


OPT/TV Unit
RF AMP
Power Supply P.C.B.
Front Fan
Lamp Fan
Top Duct Unit
Air Filters
Fan Case Unit
(OPT Fan)
Rear Fan
Support
Shield
Main P.C.B./
Drive P.C.B.
Thermal Fuse
Lamp Unit
Tuner P.C.B.
Rear Jack P.C.B.
Power P.C.B.
Rear Cover

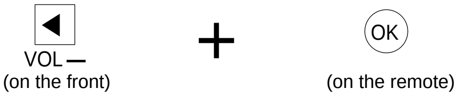
SELF CHECK

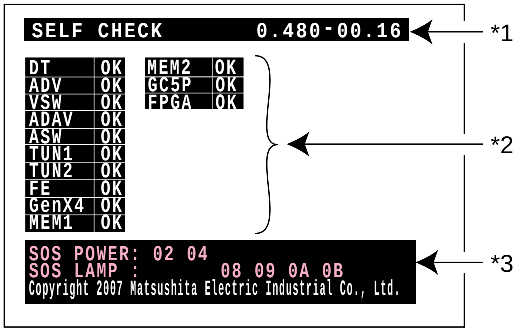
In this mode, the following information can be confirmed on the screen:

- Peaks software version and EEPROM data version
- Communication check between Peaks IC and each ICs
- SOS History

Self Check

Enter:
VOLUME DOWN button + OK key
(for more than 3 seconds in power on condition)


VOL —
(on the front)
+
OK
(on the remote)



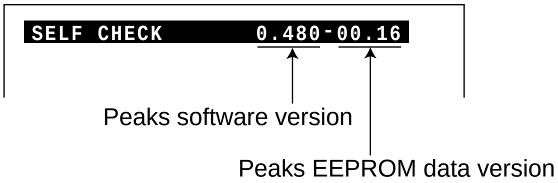
```
SELF CHECK          0.480-00.16

DT    OK   MEM2 OK
ADV   OK   GC5P OK
VSW   OK   FPGA OK
ADAV  OK
ASW   OK
TUN1  OK
TUN2  OK
FE    OK
GenX4 OK
MEM1  OK

SOS POWER: 02 04
SOS LAMP :        08 09 0A 0B
Copyright 2007 Matsushita Electric Industrial Co., Ltd.
```

<Self Check>

Exit:
Unplug the AC cord.

Fig. 1-1

*1. Peaks software version and Peaks EEPROM data version



```
SELF CHECK          0.480-00.16
```

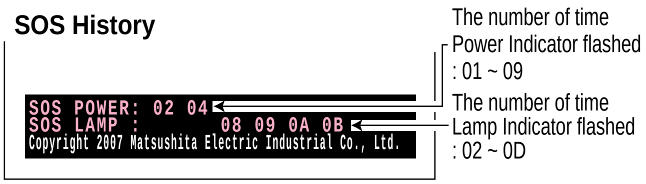
Peaks software version
Peaks EEPROM data version

*2. Communication check results (OK or NG) between Peaks IC8001 and each of the following ICs.

(Communication check for I^2C bus)

Display Item	ICs	Description
DT	IC8001	PEAKS internal check
ADV	IC5510	AD/HDMI Interface
VSW	IC3001	Video SW
ADAV	IC4001	Audio DSP
ASW	IC4101	Audio SW
TUN1	TU8201	Tuner PLL block
TUN2	TU8201	Tuner MTS block
FE	IC8802	Demodulator
GenX 4	IC6004	TV Microcontroller
MEM1	IC6005	GenX4 EEPROM
MEM2	IC8201	Peaks EEPROM
GC5P	IC7101	GC
FPGA	IC7119	FPGA

*3. SOS History



SOS History

```
SOS POWER: 02 04
SOS LAMP :        08 09 0A 0B
Copyright 2007 Matsushita Electric Industrial Co., Ltd.
```

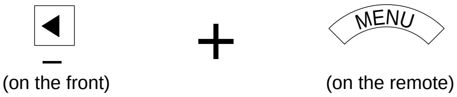
The number of time
Power Indicator flashed
: 01 ~ 09
The number of time
Lamp Indicator flashed
: 02 ~ 0D

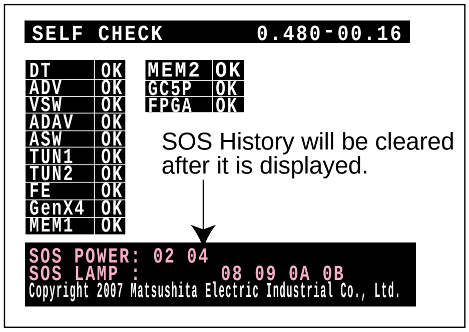
Note:
If the same SOS error occurs more than once, only one code will be displayed.

To clear SOS History, use the following Self Check-2 mode.
The SOS History and all memory function will be reset by Self Check-2.

Self Check-2

Enter:
VOLUME DOWN button + MENU key
(for more than 3 seconds in power on condition)


—
(on the front)
+
MENU
(on the remote)



```
SELF CHECK          0.480-00.16

DT    OK   MEM2 OK
ADV   OK   GC5P OK
VSW   OK   FPGA OK
ADAV  OK
ASW   OK
TUN1  OK
TUN2  OK
FE    OK
GenX4 OK
MEM1  OK

SOS POWER: 02 04
SOS LAMP :        08 09 0A 0B
Copyright 2007 Matsushita Electric Industrial Co., Ltd.
```

SOS History will be cleared after it is displayed.

<Self Check-2>

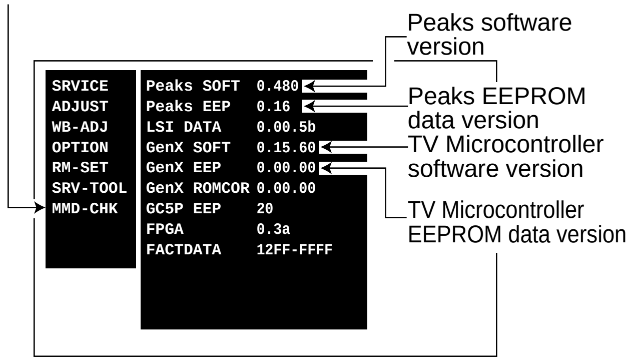
Exit:
Unplug the AC cord.

SERVICE ADJUST MODE

In this mode, the following information can be confirmed on the screen:

MMD-CHK

- Focus, Tilt, H/V Picture Position adjustment
- Internal pattern for LCD-CHK, GC-CHK



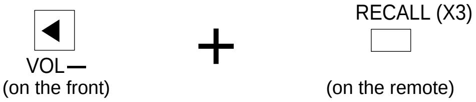
```
SRVICE      Peaks SOFT  0.480
ADJUST      Peaks EEP   0.16
WB-ADJ      LSI DATA    0.00.5b
OPTION      GenX SOFT   0.15.60
RM-SET      GenX EEP    0.00.00
SRV-TOOL    GenX ROMCOR 0.00.00
MMD-CHK     GC5P EEP    20
            FPGA        0.3a
            FACTDATA    12FF-FFFF
```

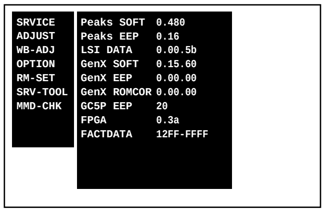
Peaks software version
Peaks EEPROM data version
TV Microcontroller software version
TV Microcontroller EEPROM data version

<Main Menu>

Service Adjust Mode

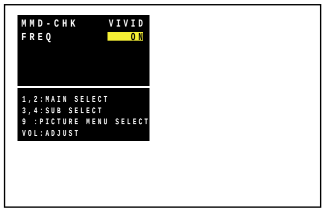
Enter:
VOLUME DOWN button + RECALL key (3 times)
(in power on condition)


RECALL (X3)
VOL–
(on the front)
+
(on the remote)



```
SRVICE    Peaks SOFT  0.480
ADJUST    Peaks EEP   0.16
WB-ADJ    LSI DATA    0.00.5b
OPTION    GenX SOFT   0.15.60
RM-SET    GenX EEP    0.00.00
SRV-TOOL  GenX ROMCOR 0.00.00
MMD-CHK   GC5P EEP    20
          FPGA        0.3a
          FACTDATA    12FF-FFFF
```

2 key ⇩ **<Main Menu>** ⇧ 1 key



```
MMD-CHK     VIVID
FREQ           ON

1,2:MAIN SELECT
3,4:SUB SELECT
9 :PICTURE MENU SELECT
VOL:ADJUST
```

<MMD-CHK 1/8>

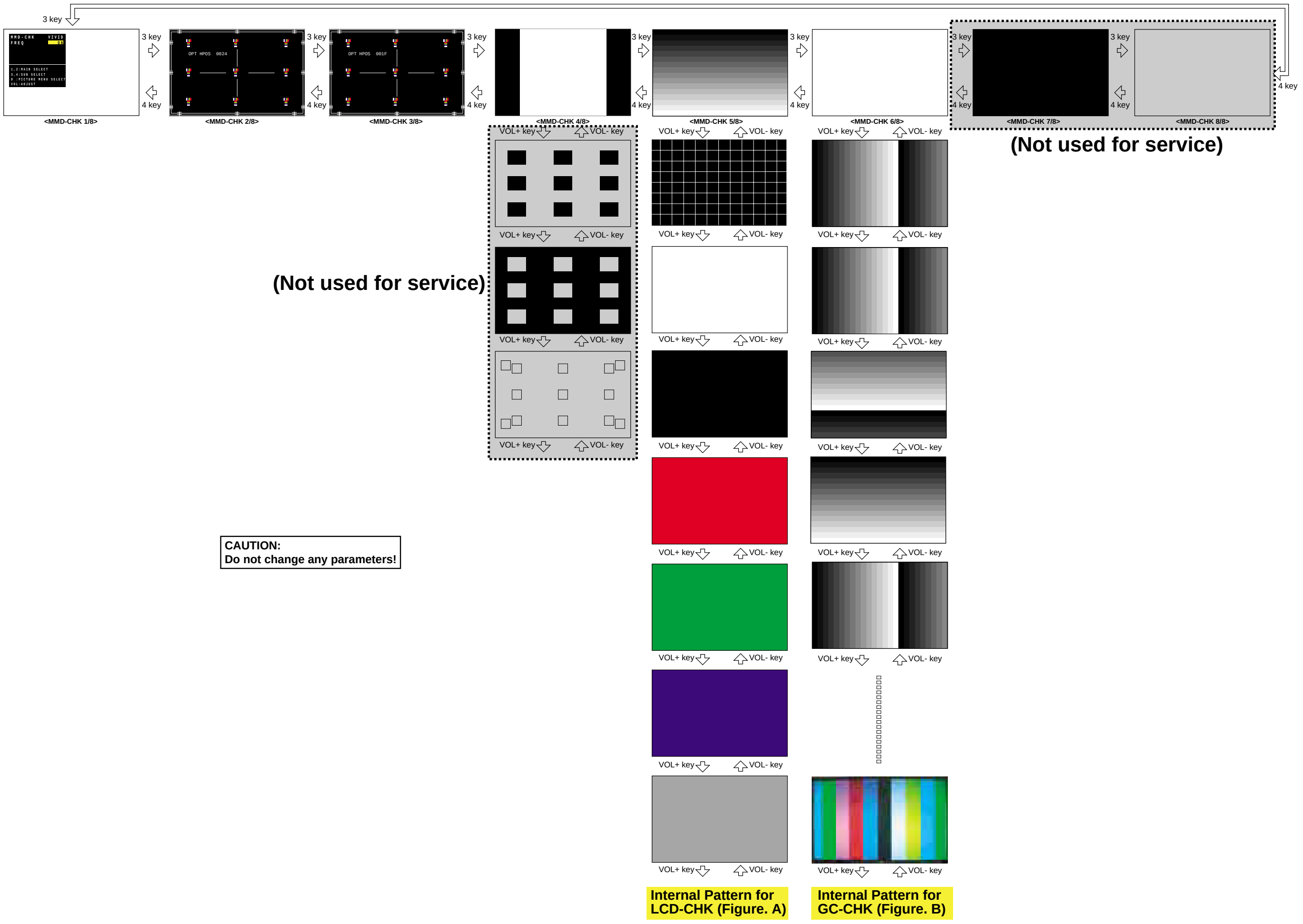
CAUTION:
Do not change any parameters!

Exit from Main Menu:
Power OFF.

Fig. 2-1

MMD-CHK 1/8~8/8 and internal pattern

Perform the Picture Position adjustment by pressing VOL+/- key, and display the internal pattern for LCD-CHK, GC-CHK.

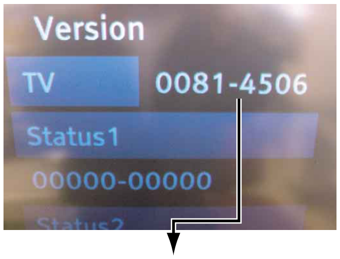

3 key
4 key
<MMD-CHK 1/8>
<MMD-CHK 2/8>
<MMD-CHK 3/8>
<MMD-CHK 4/8>
<MMD-CHK 5/8>
<MMD-CHK 6/8>
<MMD-CHK 7/8>
<MMD-CHK 8/8>
OPT HPOS 0024
OPT HPOS 001F
VOL+ key
VOL- key
(Not used for service)
(Not used for service)
Internal Pattern for LCD-CHK (Figure. A)
Internal Pattern for GC-CHK (Figure. B)

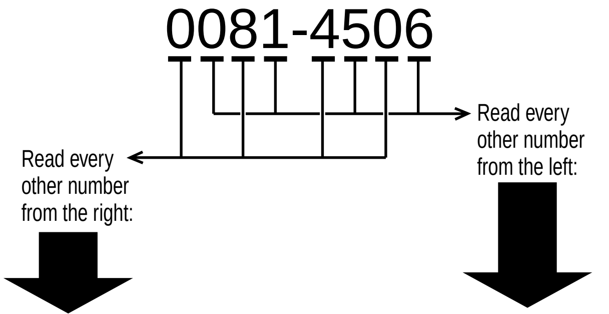
CAUTION:
Do not change any parameters!

Note:
Press 1 key to return Main Menu.

TO READ THE PEAKS SOFTWARE VERSION AND TV MICROCONTROLLER SOFTWARE VERSION

1. Press MENU key with the power on.
2. Press CH UP/DOWN key and select "Setup."
   Then press OK key.
3. Press CH UP/DOWN key and select "About."
   Then press OK key.
4. Select "Version" and press OK key.
   Version menu will appear as shown below.


Version
TV
0081-4506
Status1
00000-00000
Status2


0081-4506
Read every other number from the left:
Read every other number from the right:

Peaks software Ver. : 0.480

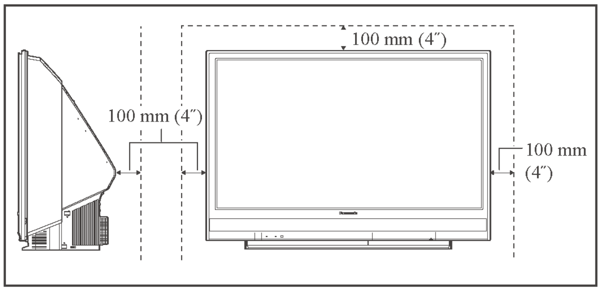
TV Microcontroller software Ver. : 0.156

INSTALLATION DIMENSIONS DIAGRAM

Installation Dimensions Diagram

⚠ CAUTION

Keep the unit at least 100 mm (4″) away from the wall to provide proper ventilation because warm air is discharged. Blocking the ventilation opening of the cooling fan may damage the unit.


100 mm (4″)
100 mm (4″)
100 mm (4″)

LAMP CAUTION

The Lamp Unit becomes very hot during operation. When replacing the Lamp Unit, wait until it has cooled off (1 hour or more).

TOP DUCT UNIT NOTE

The optical parts will be exposed to the dust in the air when the Top Duct Unit is removed. Therefore, it is strongly recommend to remove the Top Duct Unit only in a clean room.

RESET USER’S MEMORY FUNCTIONS

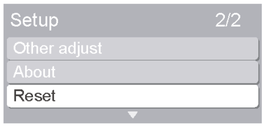
Be sure to reset the user’s memory:
- After replacing the Main P.C.B.
- When moving the unit to a new location.

Reset

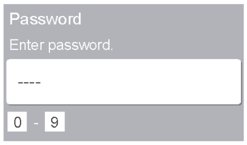
Setup is reset.

Procedure

1. **Press ▲▼ to select “Reset”.**
2. **Press OK to display the password screen.**



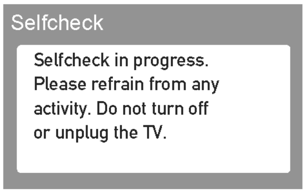
3. **Enter your password by pressing the NUMBER keys to reset the Setup settings.**



4. **The confirmation screen is displayed. Select “Yes”, and press OK.**

Notes

- Performing Reset will clear all items set with Setup, such as channel settings. Use Reset with care.
- POWER indicator flashes red. After flashing stops, unplug the unit then plug it back in and turn power ON.
- When using “EZ Sync™ “HDAVI Control™””, with the device connected, set “EZ Sync” first to “Off” and then “On” using the Setup Menu.



Selfcheck in progress.
Please refrain from any
activity. Do not turn off
or unplug the TV.

After the above message indication disappeared, unplug the unit then plug it back in and turn power ON.

Fig. 4

Note:
SOS History will not be cleared in this function. To clear, use Self Check-2 mode.

DO NOT UNPLUG AC CORD DURING COOLING OPERATION

The lamp cooling fan will continue to operate for approximately 30 seconds after the power is turned off.
At the same time, the POWER LED will flash red.
Do not disconnect the AC Cord from the power outlet and do not open any circuit breakers while the cooling fan is still operating.

HOT CIRCUIT

Primary circuit exists on the Power P.C.B.
This circuit is identified as "**HOT**" on the P.C.B. and in the Service Manual. Use extreme care to prevent accidental shock when servicing.

MODEL NO. IDENTIFICATION MARK

Use Marks shown in the chart below to distinguish the different models included in this Service Manual.

MODEL	MARK
PT-50LCZ70	A
PT-56LCZ70	B
PT-61LCZ70	C
PT-50LCZ7	D
PT-56LCZ7	E
PT-61LCZ7	F
PT-50LCZ70-K	G
PT-56LCZ70-K	H
PT-61LCZ70-K	I
NOT USED	PT

Note:
Refer to Item 3 of Schematic Diagram Notes of Schematic Diagram and Circuit Board Layout Notes, for mark "PT."

WIRE AND LEAD POSITION DIAGRAM OF THE UNIT

After servicing, make sure that all wires, leads, and clampers are placed in their original position. It is important for the best operation of the unit.

Note: Use extreme care especially for the following.

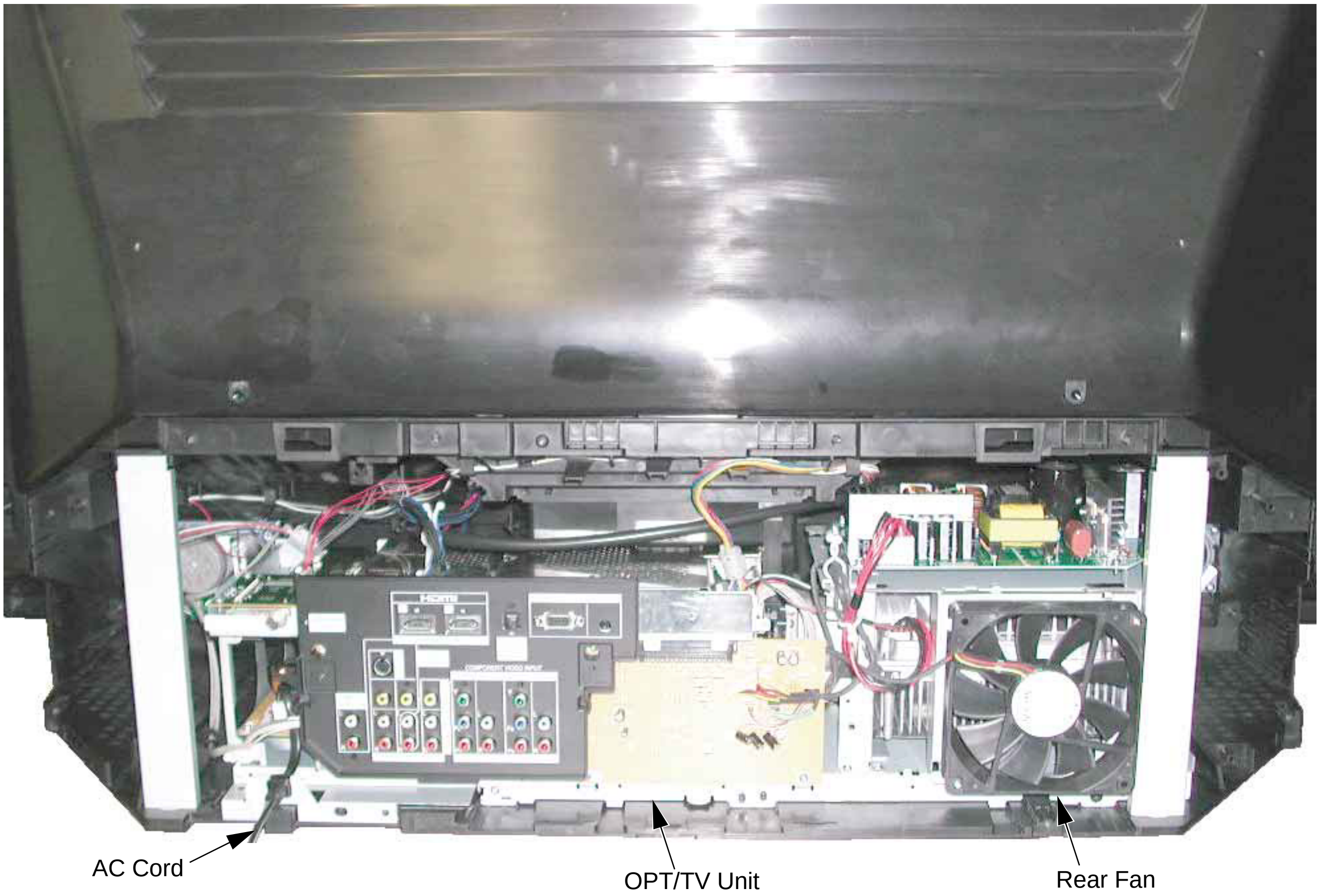


Fig. 9-1

After servicing, make sure that all wires, leads, and clampers are placed in their original position. It is important for the best operation of the unit.

Note: Use extreme care especially for the following.

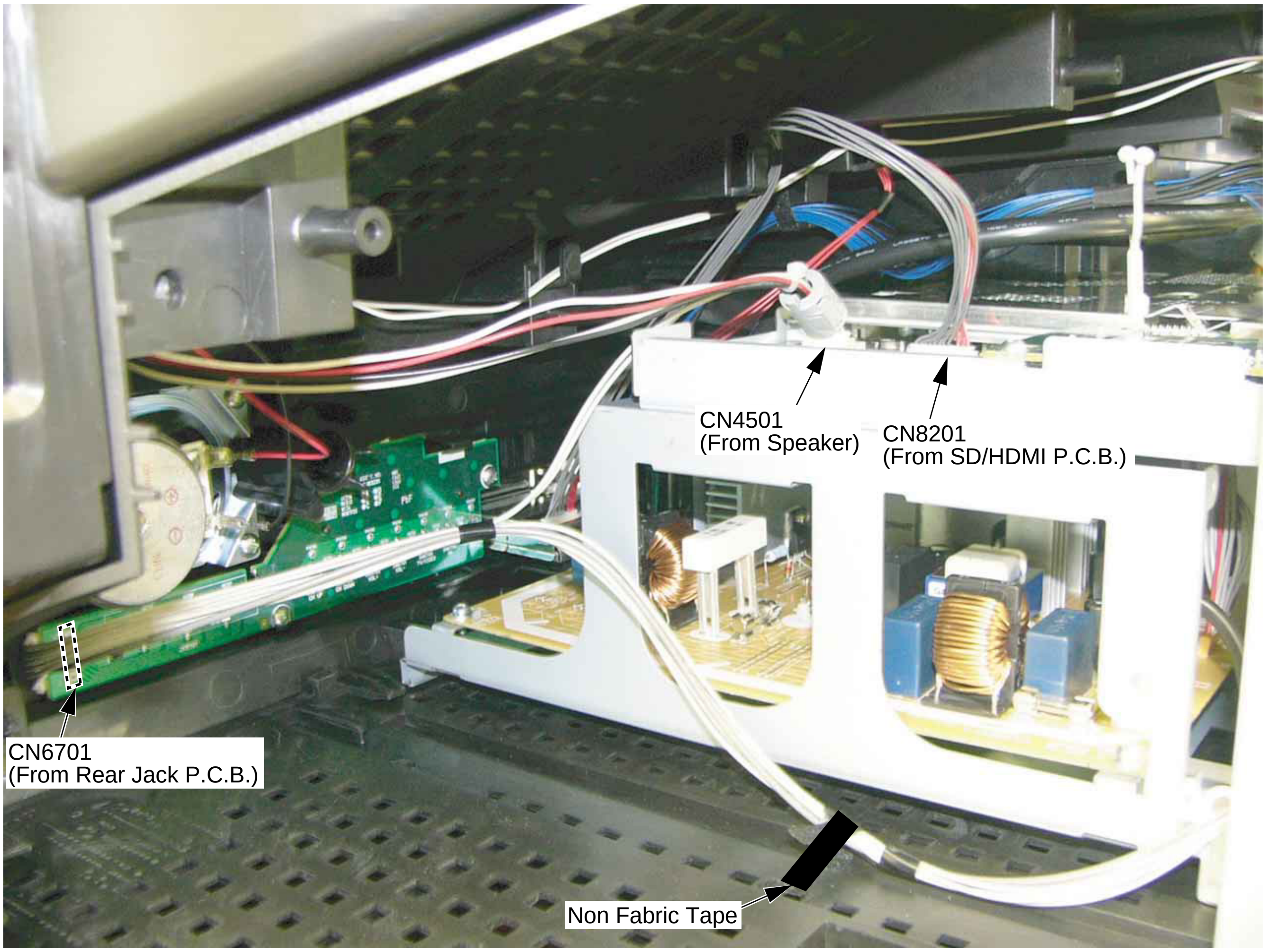

CN4501
(From Speaker)
CN8201
(From SD/HDMI P.C.B.)
CN6701
(From Rear Jack P.C.B.)
Non Fabric Tape

Fig. 9-2

After servicing, make sure that all wires, leads, and clampers are placed in their original position. It is important for the best operation of the unit.
Note: Use extreme care especially for the following.

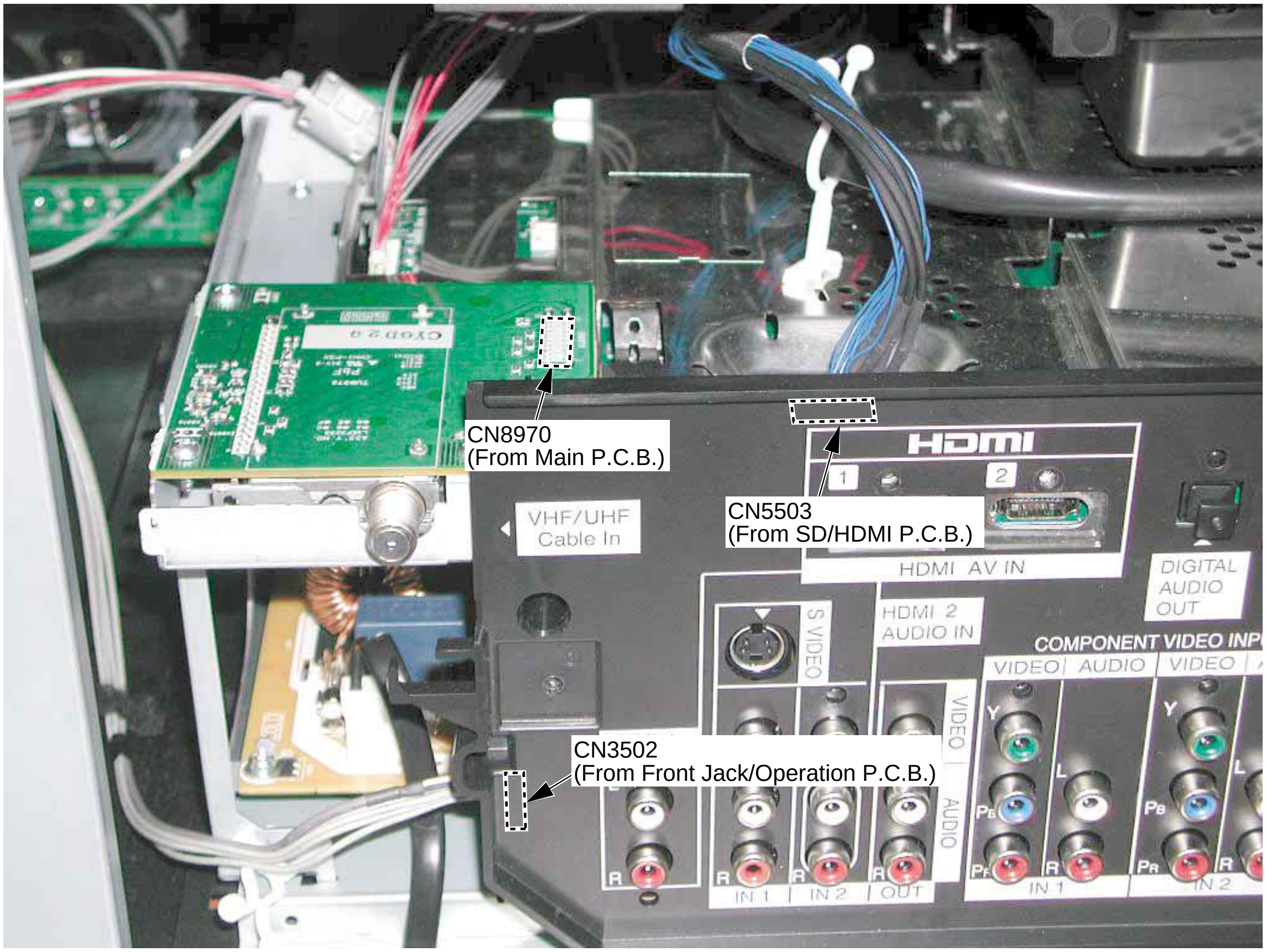

CN8970
(From Main P.C.B.)
CN5503
(From SD/HDMI P.C.B.)
CN3502
(From Front Jack/Operation P.C.B.)
VHF/UHF Cable In
HDMI
HDMI AV IN
DIGITAL AUDIO OUT
HDMI 2 AUDIO IN
S VIDEO
COMPONENT VIDEO INP
VIDEO
AUDIO
IN 1
IN 2
OUT

Fig. 9-3

After servicing, make sure that all wires, leads, and clampers are placed in their original position. It is important for the best operation of the unit.
Note: Use extreme care especially for the following.

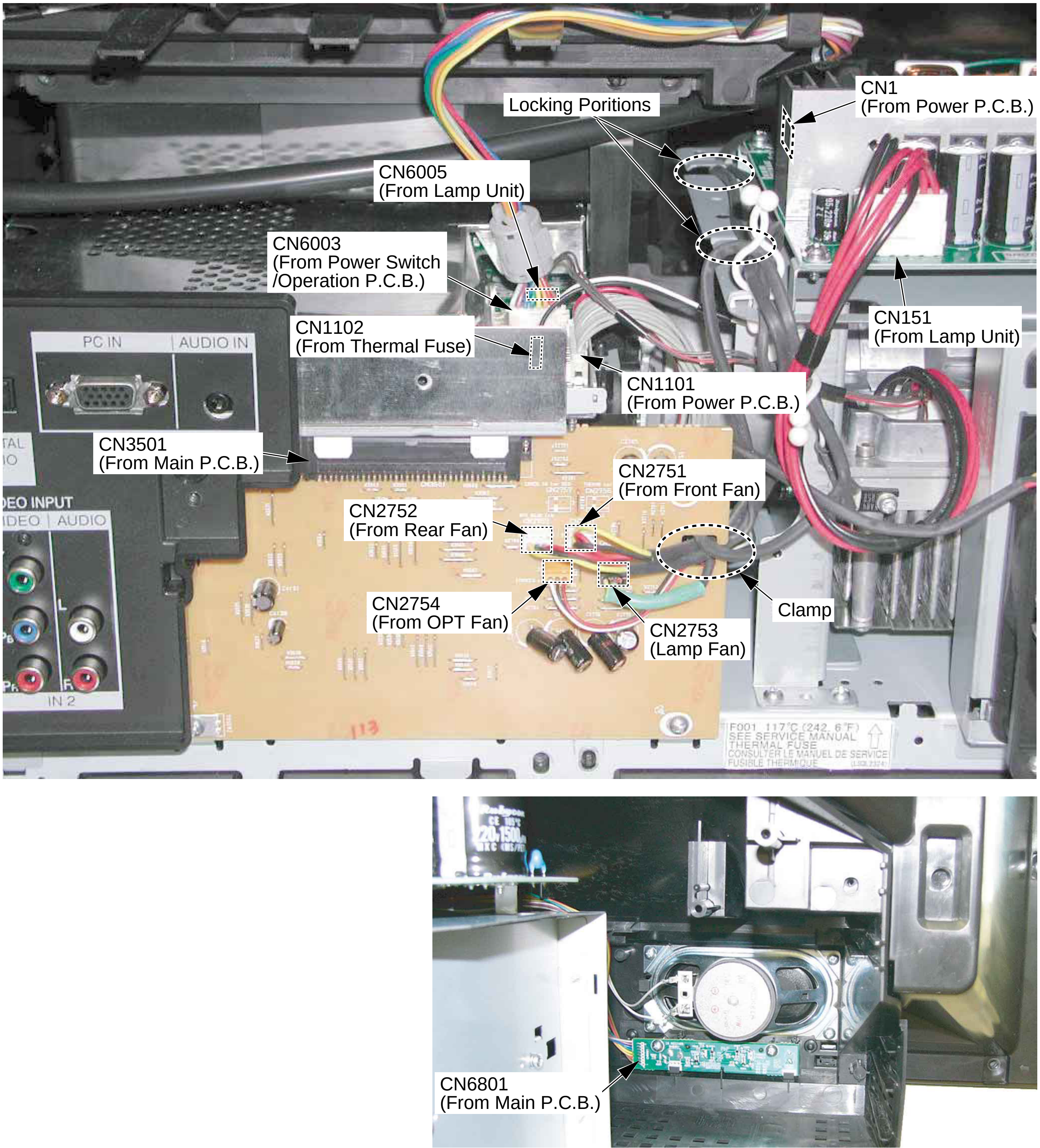

CN1
(From Power P.C.B.)
Locking Poritions
CN6005
(From Lamp Unit)
CN6003
(From Power Switch
/Operation P.C.B.)
CN1102
(From Thermal Fuse)
CN151
(From Lamp Unit)
CN1101
(From Power P.C.B.)
CN3501
(From Main P.C.B.)
CN2751
(From Front Fan)
CN2752
(From Rear Fan)
CN2754
(From OPT Fan)
Clamp
CN2753
(Lamp Fan)
CN6801
(From Main P.C.B.)

Fig. 9-4

After servicing, make sure that all wires, leads, and clampers are placed in their original position. It is important for the best operation of the unit.

Note: Use extreme care especially for the following.

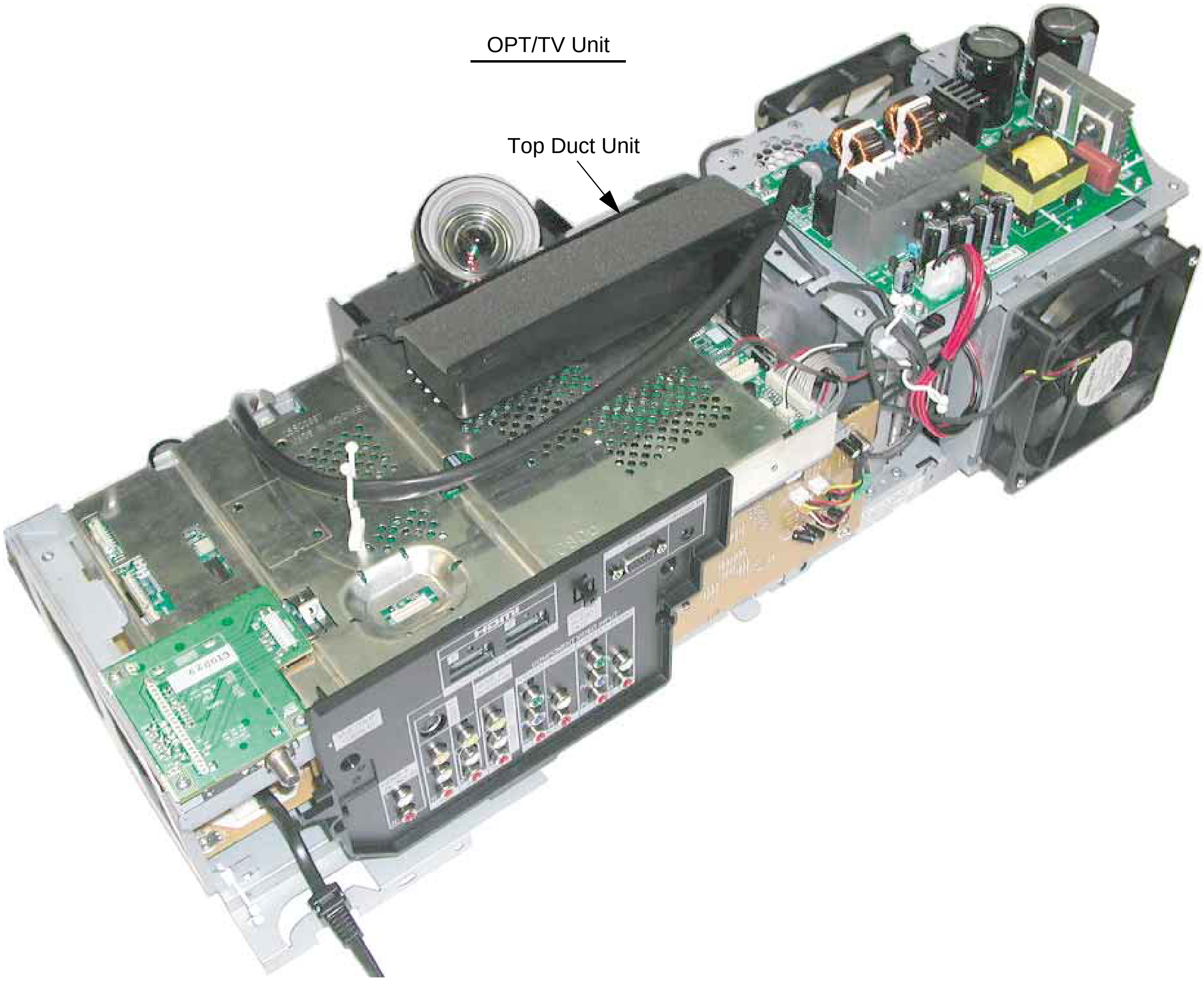


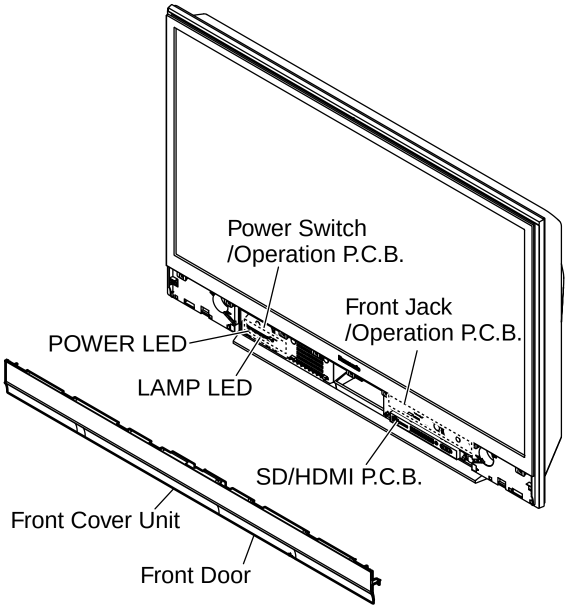
Fig. 9-5

6 Troubleshooting Guide

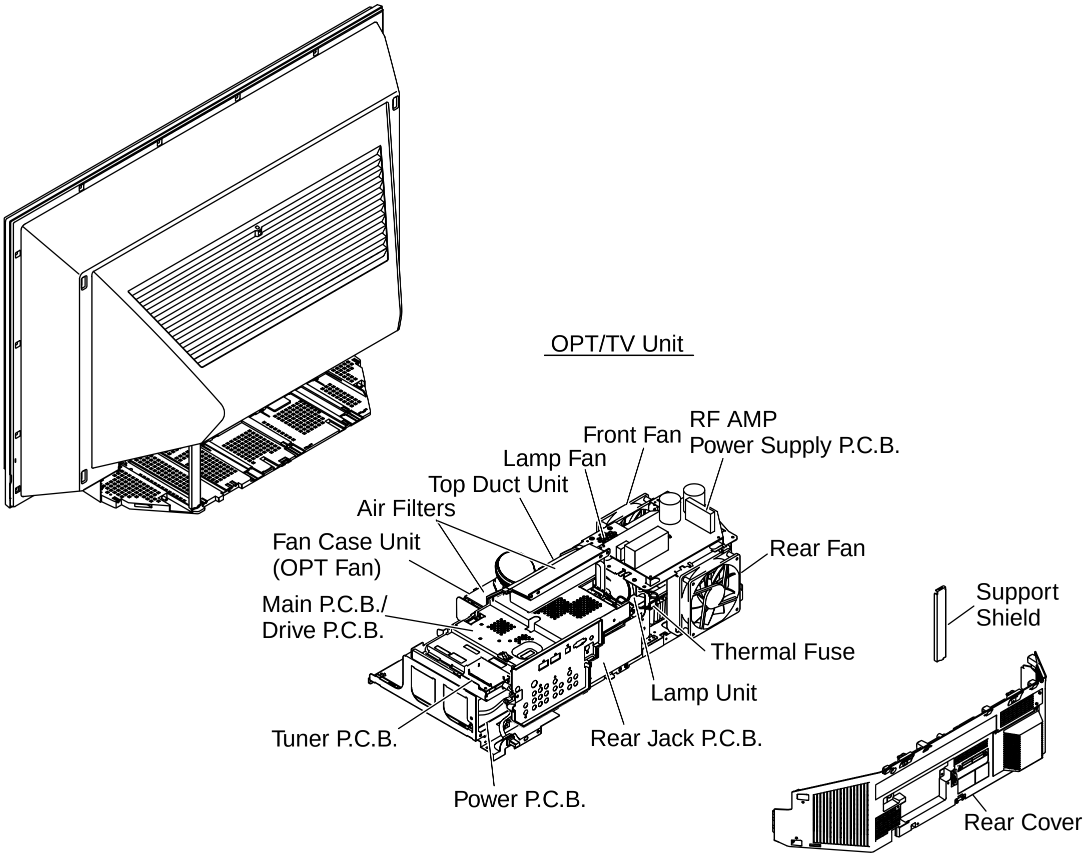
6.1. Troubleshooting Hints for Block Level Repair

MAIN PARTS LOCATION

<Front View>

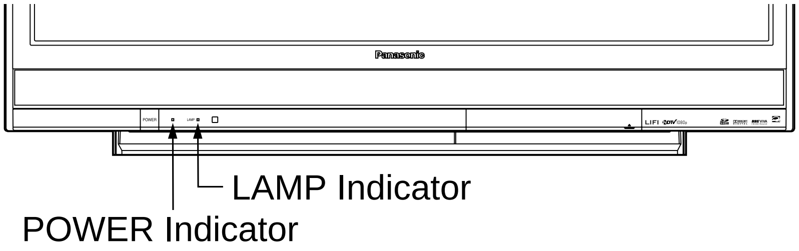

Power Switch
/Operation P.C.B.
Front Jack
/Operation P.C.B.
POWER LED
LAMP LED
SD/HDMI P.C.B.
Front Cover Unit
Front Door

<Rear View>


OPT/TV Unit
Front Fan
RF AMP
Power Supply P.C.B.
Lamp Fan
Top Duct Unit
Air Filters
Fan Case Unit
(OPT Fan)
Rear Fan
Support
Shield
Main P.C.B./
Drive P.C.B.
Thermal Fuse
Lamp Unit
Tuner P.C.B.
Rear Jack P.C.B.
Power P.C.B.
Rear Cover

INDICATIONS FOR ERROR CONDITIONS

Each Indicator facilitates finding the cause of an error.
When an error is detected, the Lamp goes off and the indicators on the front flash.



(Note 1)

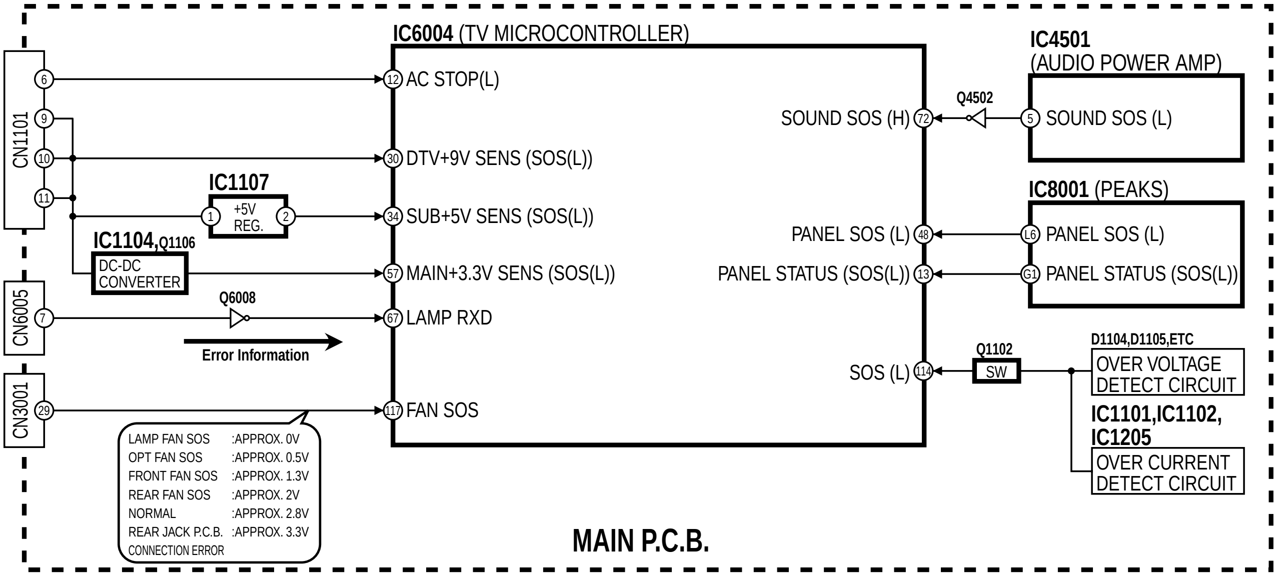
Priority	Error Information	POWER Indicator flashes orange	LAMP Indicator flashes red	SOS	LAMP OFF	RESET
1	Over voltage/Over current (SOS)	1	-	01	○	AC ON/OFF
2	Abnormal voltage (DTV+9V line)	2	-	02	○	
3	Abnormal voltage (SUB+5V line)	3	-	03	○	
4	Abnormal voltage (MAIN+3.3V line)	4	-	04	○	
5	IC4501 (Audio Amp) failure	6	-	06	○	
6	Communication error between Peaks (IC8001) and TV Microcontroller (IC6004)	7	-	07	○	
7	Communication error between Peaks (IC8001) and TV Microcontroller (IC6004)	9	-	09	○	
12	Lamp does not light up	-	2	02	○	Power ON/OFF
9	Lamp failure	-	3	03	○	
10	Abnormal Lamp temperature	-	4	04	○	
11	Lamp communication error	-	5	05	○ (Note 2)	
14	Lamp Fan stops	-	8	08	○	AC ON/OFF
15	Fan Case Unit (OPT Fan) stops	-	9	09	○	
16	Front Fan or Rear Fan stops	-	10	0A	○	
17	Rear Fan or Front Fan stops	-	11	0B	○	
13	Rear Jack PCB connection error	-	12	0C	○	
8	Abnormal Lamp input voltage (+26V)	-	13	0D	○	Power ON/OFF

Note:

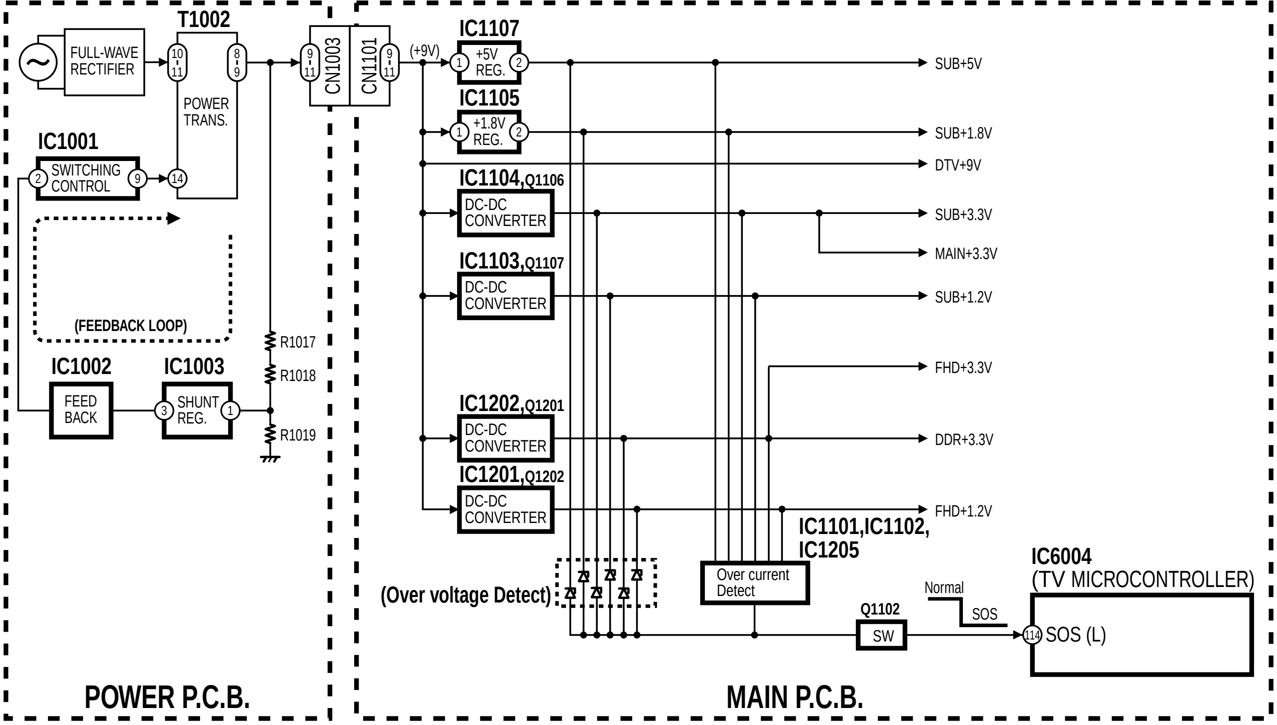
1. The detected Error data will be stored in the EEPROM, and SOS History (Code) is displayed in Self Check mode or Service Adjust mode (SRV-TOOL).
2. The Lamp Indicator will flash X5 immediately after the Lamp goes off. For this SOS only, the TV power will remain on.

Protection Circuit

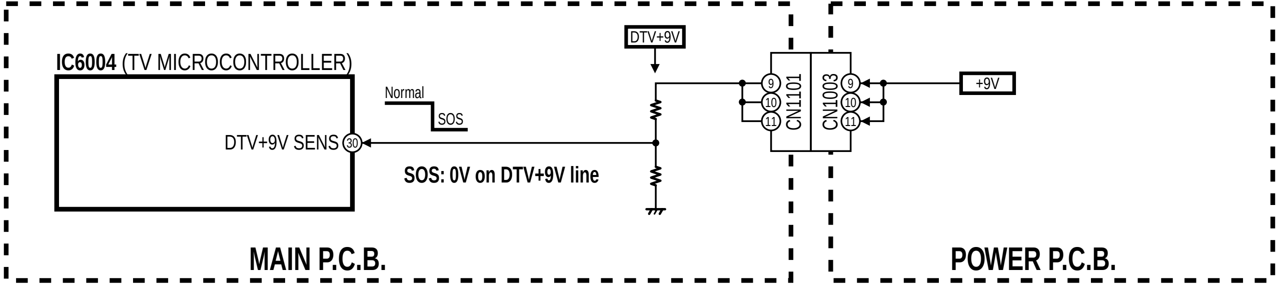
SOS terminal of IC6004 (TV microcontroller)


IC6004 (TV MICROCONTROLLER)
CN1101
6
9
10
11
12 AC STOP(L)
30 DTV+9V SENS (SOS(L))
IC1107
1 +5V REG. 2
34 SUB+5V SENS (SOS(L))
IC1104,Q1106
DC-DC CONVERTER
57 MAIN+3.3V SENS (SOS(L))
CN6005
7
Q6008
67 LAMP RXD
Error Information
CN3001
29
117 FAN SOS
LAMP FAN SOS :APPROX. 0V
OPT FAN SOS :APPROX. 0.5V
FRONT FAN SOS :APPROX. 1.3V
REAR FAN SOS :APPROX. 2V
NORMAL :APPROX. 2.8V
REAR JACK P.C.B. :APPROX. 3.3V
CONNECTION ERROR
IC4501
(AUDIO POWER AMP)
Q4502
SOUND SOS (H) 72
5 SOUND SOS (L)
IC8001 (PEAKS)
PANEL SOS (L) 48
L6 PANEL SOS (L)
PANEL STATUS (SOS(L)) 13
G1 PANEL STATUS (SOS(L))
Q1102
SW
SOS (L) 114
D1104,D1105,ETC
OVER VOLTAGE DETECT CIRCUIT
IC1101,IC1102, IC1205
OVER CURRENT DETECT CIRCUIT
MAIN P.C.B.

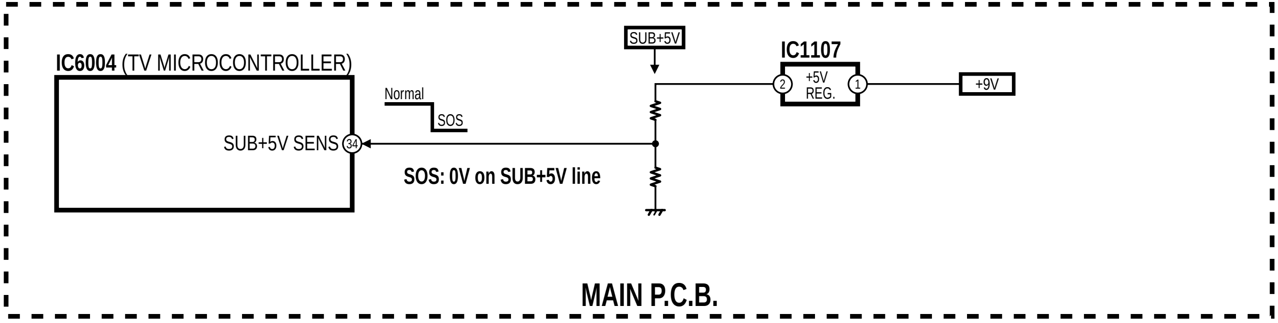
[POWER Indicator one blink] Over voltage/current detection circuit


T1002
FULL-WAVE RECTIFIER
10 11
8 9
POWER TRANS.
14
IC1001
2 SWITCHING CONTROL 9
(FEEDBACK LOOP)
IC1002
FEED BACK
IC1003
3 SHUNT REG. 1
R1017
R1018
R1019
9 11
CN1003
CN1101
9 11
(+9V)
IC1107
1 +5V REG. 2
IC1105
1 +1.8V REG. 2
IC1104,Q1106
DC-DC CONVERTER
IC1103,Q1107
DC-DC CONVERTER
IC1202,Q1201
DC-DC CONVERTER
IC1201,Q1202
DC-DC CONVERTER
SUB+5V
SUB+1.8V
DTV+9V
SUB+3.3V
MAIN+3.3V
SUB+1.2V
FHD+3.3V
DDR+3.3V
FHD+1.2V
(Over voltage Detect)
Over current Detect
IC1101,IC1102, IC1205
Q1102
SW
Normal
SOS
IC6004
(TV MICROCONTROLLER)
114 SOS (L)
POWER P.C.B.
MAIN P.C.B.

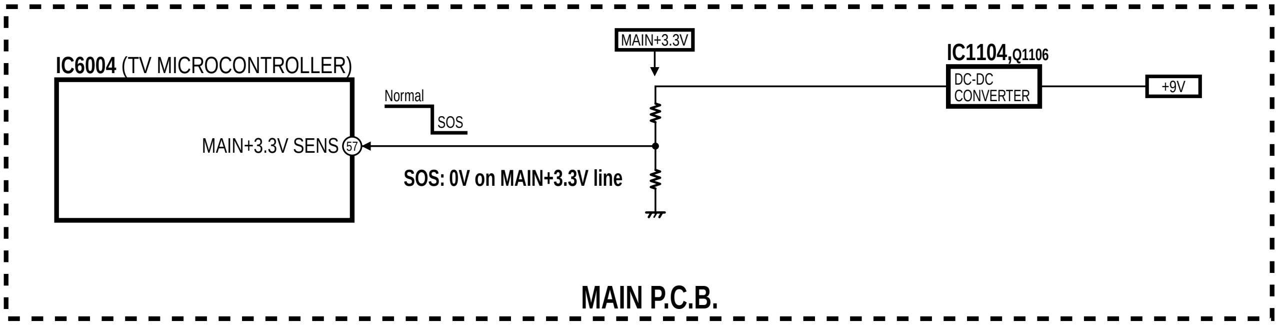
[POWER Indicator two blinks] Abnormal voltage (DTV+9V) detection circuit


IC6004 (TV MICROCONTROLLER)
DTV+9V SENS 30
Normal
SOS
DTV+9V
SOS: 0V on DTV+9V line
9 10 11
CN1101
CN1003
9 10 11
+9V
MAIN P.C.B.
POWER P.C.B.

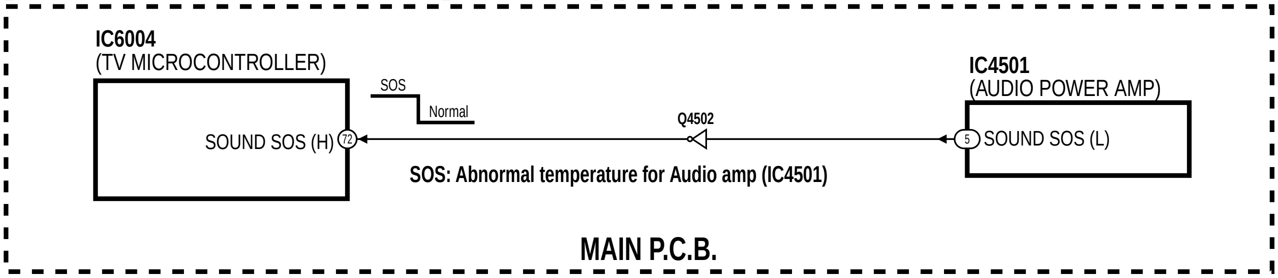
[POWER Indicator three blinks] Abnormal voltage (SUB+5V line) detection circuit


IC6004 (TV MICROCONTROLLER)
SUB+5V SENS
34
Normal
SOS
SOS: 0V on SUB+5V line
SUB+5V
IC1107
+5V REG.
2
1
+9V
MAIN P.C.B.

[POWER Indicator four blinks] Abnormal voltage (MAIN+3.3V line) detection circuit

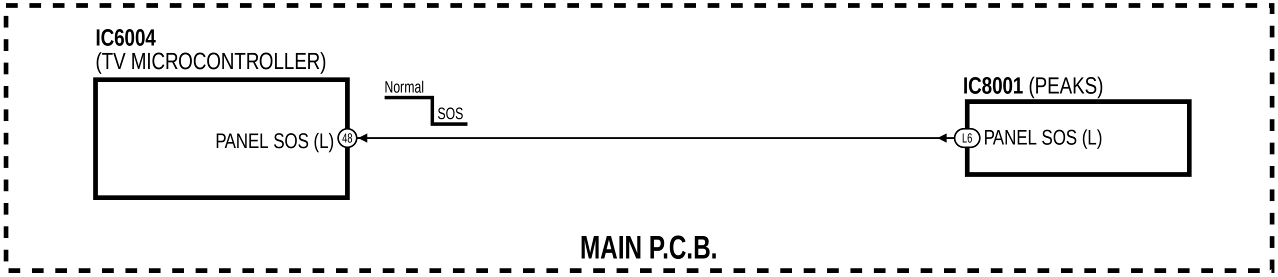

IC6004 (TV MICROCONTROLLER)
MAIN+3.3V SENS
57
Normal
SOS
SOS: 0V on MAIN+3.3V line
MAIN+3.3V
IC1104,Q1106
DC-DC CONVERTER
+9V
MAIN P.C.B.

[POWER Indicator six blinks] Audio Amp (IC4501) failure detection circuit


IC6004
(TV MICROCONTROLLER)
SOUND SOS (H)
72
SOS
Normal
Q4502
SOS: Abnormal temperature for Audio amp (IC4501)
IC4501
(AUDIO POWER AMP)
5
SOUND SOS (L)
MAIN P.C.B.

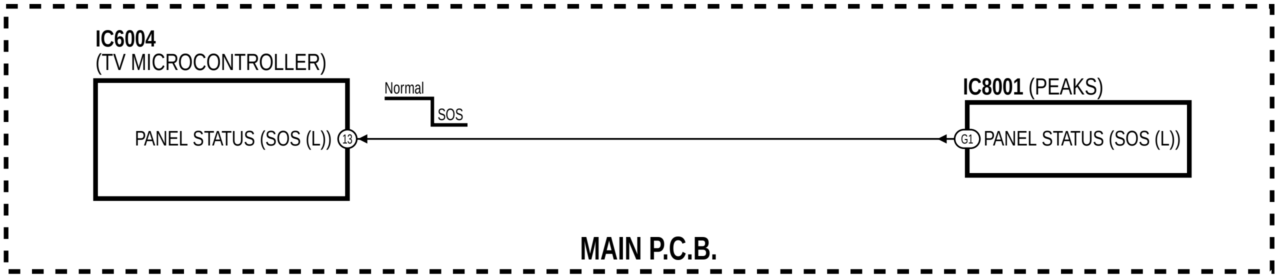
[POWER Indicator seven blinks]

Communication error between Peaks (IC8001) and TV microcontroller (IC6004) detection circuit


IC6004
(TV MICROCONTROLLER)
PANEL SOS (L)
48
Normal
SOS
IC8001 (PEAKS)
L6
PANEL SOS (L)
MAIN P.C.B.

[POWER Indicator nine blinks]

Communication error between Peaks (IC8001) and TV microcontroller (IC6004) detection circuit


IC6004
(TV MICROCONTROLLER)
PANEL STATUS (SOS (L))
13
Normal
SOS
IC8001 (PEAKS)
G1
PANEL STATUS (SOS (L))
MAIN P.C.B.

[LAMP Indicator two blinks]

Lamp does not light up detection circuit

[LAMP Indicator three blinks]

Lamp failure detection circuit

[LAMP Indicator four blinks]

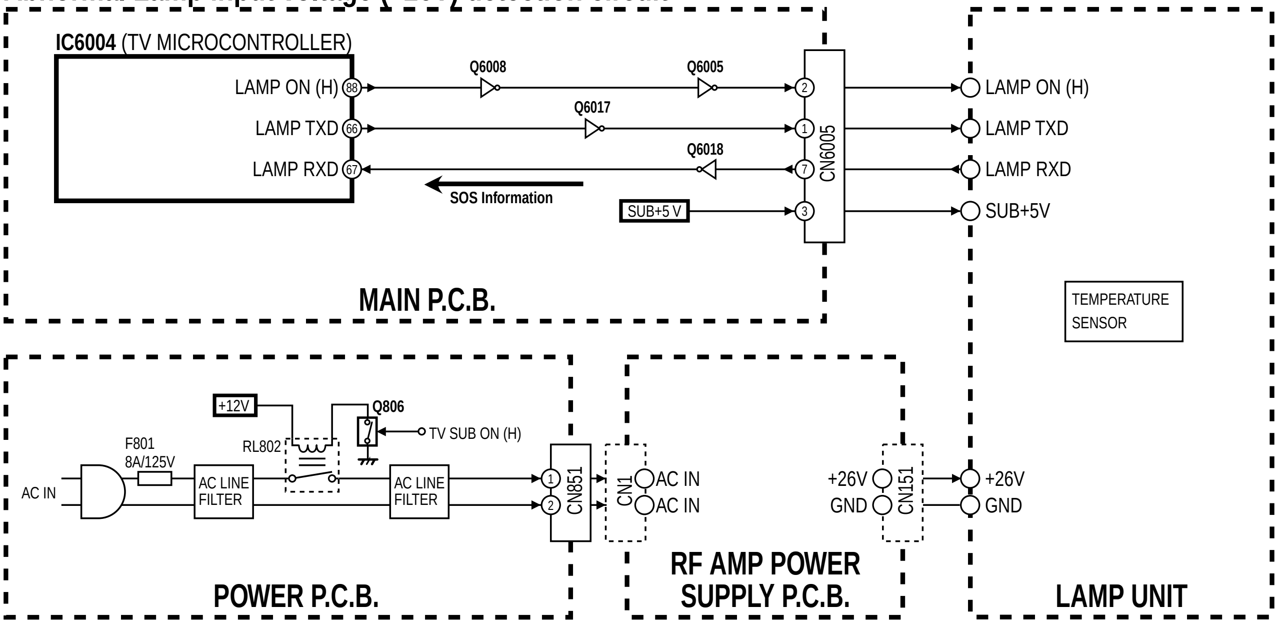
Abnormal Lamp temperature detection circuit

[LAMP Indicator five blinks]

Lamp communication error detection circuit

[LAMP Indicator thirteen blinks]

Abnormal Lamp input voltage (+26V) detection circuit


IC6004 (TV MICROCONTROLLER)
LAMP ON (H)
88
LAMP TXD
66
LAMP RXD
67
Q6008
Q6005
Q6017
Q6018
SOS Information
SUB+5 V
2
1
7
3
CN6005
LAMP ON (H)
LAMP TXD
LAMP RXD
SUB+5V
MAIN P.C.B.
TEMPERATURE
SENSOR
+12V
Q806
TV SUB ON (H)
F801
8A/125V
RL802
AC IN
AC LINE
FILTER
AC LINE
FILTER
1
2
CN851
CN1
AC IN
AC IN
+26V
GND
CN151
+26V
GND
POWER P.C.B.
RF AMP POWER
SUPPLY P.C.B.
LAMP UNIT

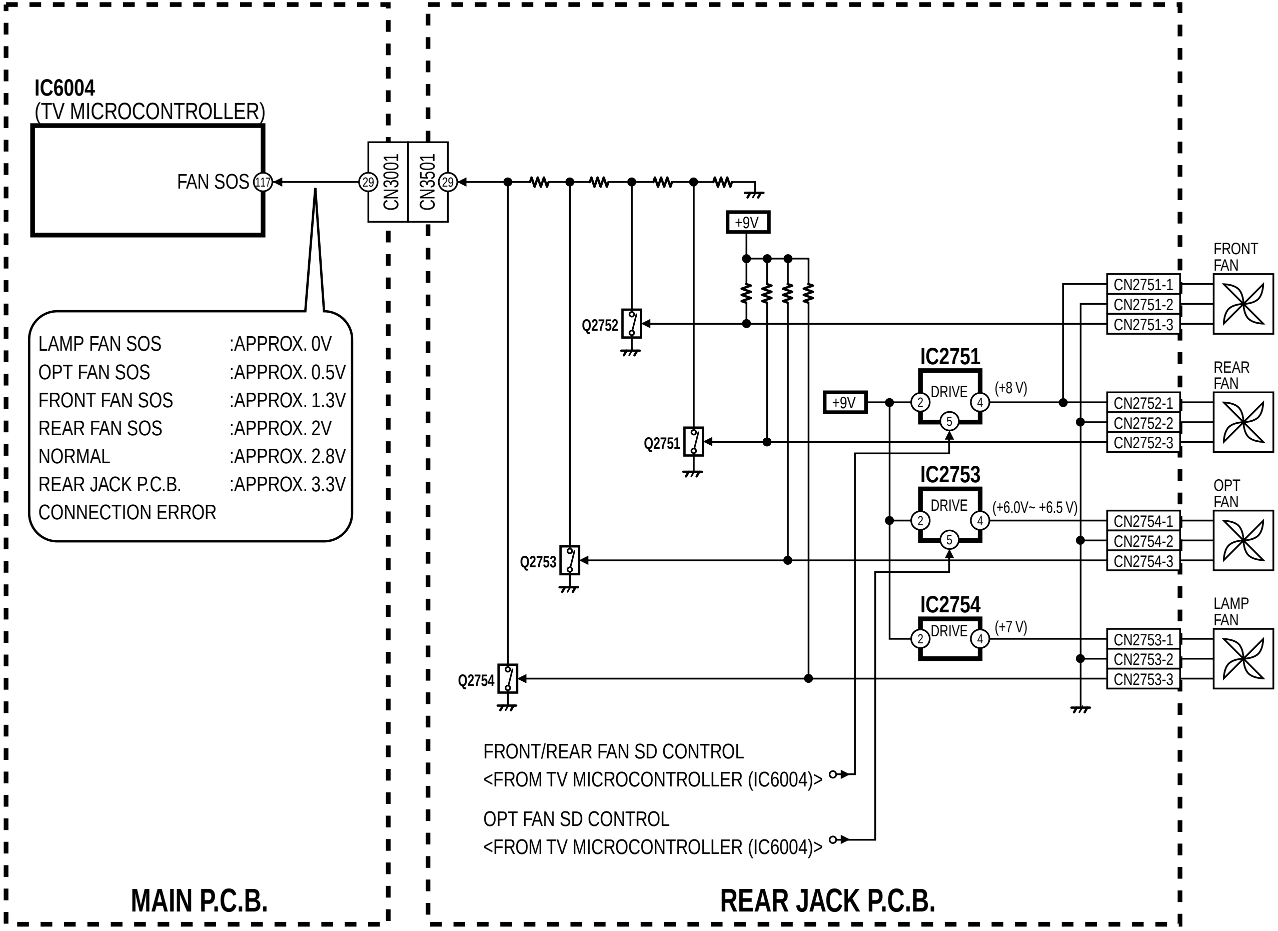
[LAMP Indicator eight blinks] LAMP Fan stops detection circuit

[LAMP Indicator nine blinks] OPT Fan stops detection circuit

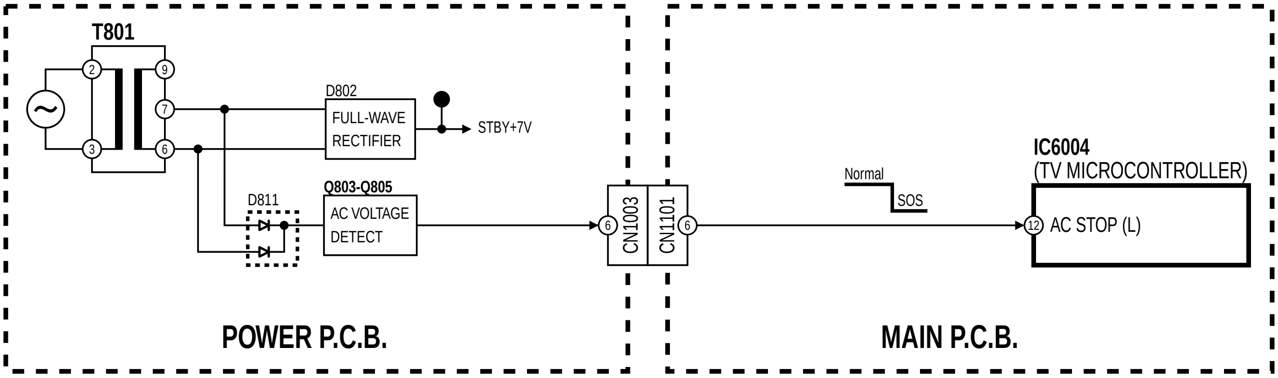
[LAMP Indicator ten blinks] Front Fan or Rear Fan stops detection circuit

[LAMP Indicator eleven blinks] Rear Fan or Front Fan stops detection circuit

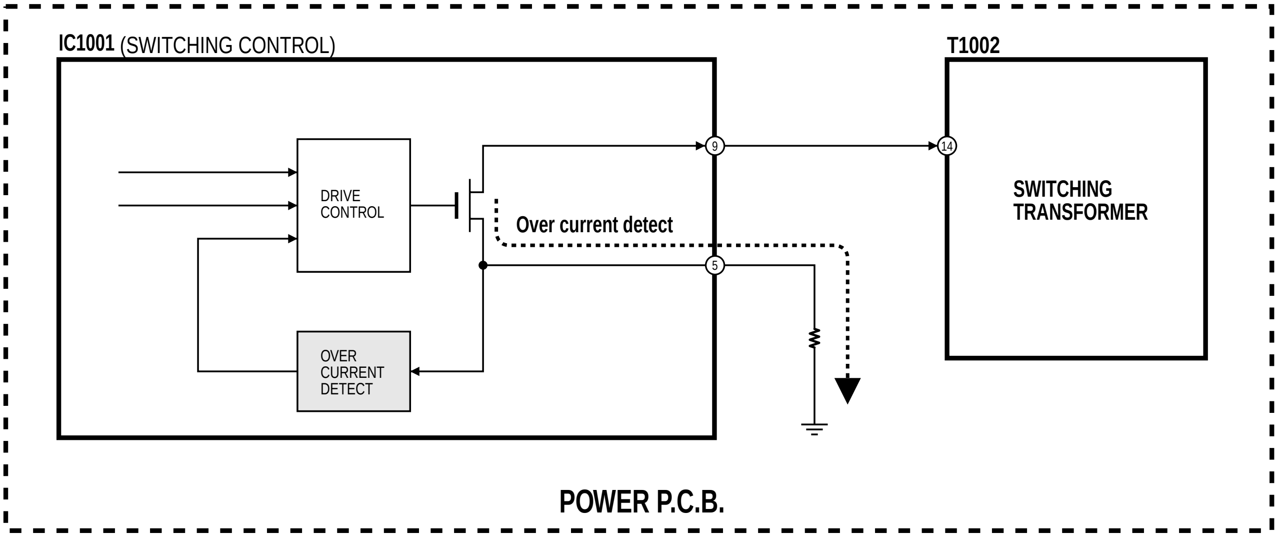
[LAMP Indicator twelve blinks] Rear Jack P.C.B. connection error detection circuit


IC6004
(TV MICROCONTROLLER)
FAN SOS
117
29
CN3001
CN3501
29
+9V
LAMP FAN SOS :APPROX. 0V
OPT FAN SOS :APPROX. 0.5V
FRONT FAN SOS :APPROX. 1.3V
REAR FAN SOS :APPROX. 2V
NORMAL :APPROX. 2.8V
REAR JACK P.C.B. CONNECTION ERROR :APPROX. 3.3V
Q2752
Q2751
Q2753
Q2754
IC2751
DRIVE
+9V
2
4
5
(+8 V)
IC2753
DRIVE
2
4
5
(+6.0V~ +6.5 V)
IC2754
DRIVE
2
4
(+7 V)
FRONT FAN
CN2751-1
CN2751-2
CN2751-3
REAR FAN
CN2752-1
CN2752-2
CN2752-3
OPT FAN
CN2754-1
CN2754-2
CN2754-3
LAMP FAN
CN2753-1
CN2753-2
CN2753-3
FRONT/REAR FAN SD CONTROL
<FROM TV MICROCONTROLLER (IC6004)>
OPT FAN SD CONTROL
<FROM TV MICROCONTROLLER (IC6004)>
MAIN P.C.B.
REAR JACK P.C.B.

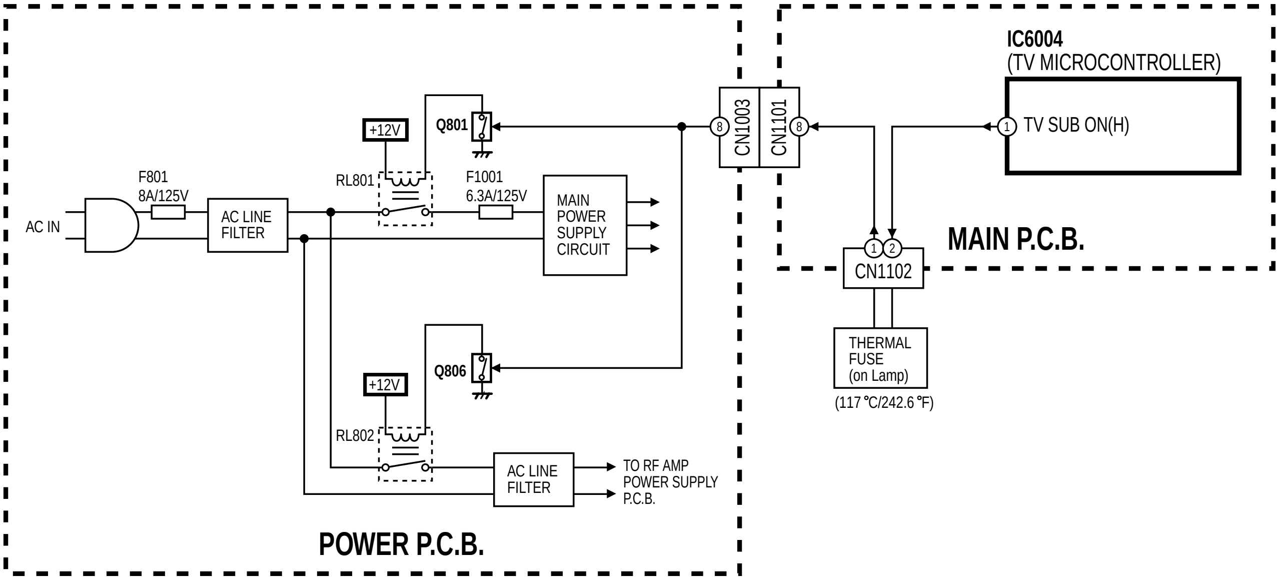
● AC stop detection circuit


T801
2
9
7
3
6
D802
FULL-WAVE RECTIFIER
STBY+7V
Q803-Q805
AC VOLTAGE DETECT
D811
6
CN1003
CN1101
6
Normal
SOS
IC6004
(TV MICROCONTROLLER)
12 AC STOP (L)
POWER P.C.B.
MAIN P.C.B.

● Over current detection circuit


IC1001 (SWITCHING CONTROL)
T1002
DRIVE CONTROL
Over current detect
OVER CURRENT DETECT
9
5
14
SWITCHING TRANSFORMER
POWER P.C.B.

● Abnormal Temperature (Thermal fuse) detection circuit


IC6004
(TV MICROCONTROLLER)
1 TV SUB ON(H)
+12V
Q801
8
CN1003
CN1101
8
F801
8A/125V
RL801
F1001
6.3A/125V
AC IN
AC LINE FILTER
MAIN POWER SUPPLY CIRCUIT
1
2
CN1102
MAIN P.C.B.
THERMAL FUSE (on Lamp)
(117 °C/242.6 °F)
+12V
Q806
RL802
AC LINE FILTER
TO RF AMP POWER SUPPLY P.C.B.
POWER P.C.B.

How to solve problems indicated by the Error Indication

(The symptom of all errors is that the Lamp goes off)

Note: Before performing troubleshooting, confirm that all connector cables in the unit are connected correctly.

POWER Indicator	Problem	Possible Solution
1	**[POWER Indicator one blink]** The following voltage lines on the Main P.C.B. is over current. • SUB+5V line • SUB+1.8V line • SUB+3.3V line • SUB+1.2V line • DDR+3.3V line • FHD+1.2V line The following voltage lines on the Main P.C.B. is over voltage. • DT+9V line • SUB+5V line • SUB+1.8V line • SUB+3.3V line • SUB+1.2V line • DDR+3.3V line • FHD+1.2V line	1. Replace the Power P.C.B. 2. If still NG, replace the OPT/TV Unit.
2	**[POWER Indicator two blinks]** DT+9V line error.	1. Check that Connector CN1102 (Thermal Fuse) on the Main P.C.B. is connected firmly. 2. If still NG, replace the Power P.C.B. 3. If still NG, replace the OPT/TV Unit.
3	**[POWER Indicator three blinks]** SUB+5V line error.	1. Replace the OPT/TV Unit.
4	**[POWER Indicator four blinks]** MAIN+3.3V line error.	
6	**[POWER Indicator six blinks]** AUDIO AMP (IC4501) failure	
7	**[POWER Indicator seven blinks]** Communication error between Peaks (IC8001) and TV microcontroller (IC6004) on the Main P.C.B.	
9	**[POWER Indicator nine blinks]** Communication error between Peaks (IC8001) and TV microcontroller (IC6004) on the Main P.C.B.	

How to solve problems indicated by the Error Indication

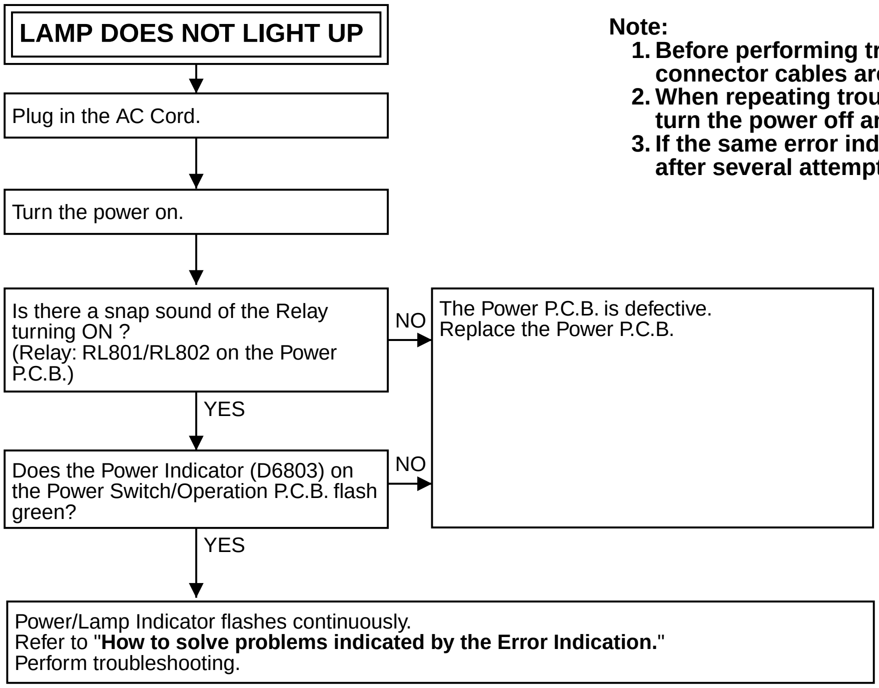
(The symptom of all errors is that the Lamp goes off)

Note: Before performing the troubleshooting, confirm that all connector cables in the unit are connected correctly.

LAMP Indicator	Problem	Possible Solution
2	**[LAMP Indicator two blinks]** Lamp does not light up.	1. Try to turn on the power several times. (Wait 5 minutes before retrying.) 2. If still NG, replace the Lamp Unit.
3	**[LAMP Indicator three blinks]** Lamp failure (Internal Lamp thermistor open or short).	1. Try to turn on the power several times. (Wait 5 minutes before retrying.) 2. If still NG, replace the Lamp Unit.
4	**[LAMP Indicator four blinks]** Abnormal Lamp temperature (more than 92 ˚C).	1. Relocate the unit to a proper location. Keep the unit at least 100 mm (4") away from the wall to provide proper ventilation because warm air is discharged. Blocking the ventilation opening of the cooling fan may damage the unit. 2. Wait until the Lamp has cooled off (approximately 1 hour) and try to turn on the power several times. 3. If still NG, check whether the Fans rotate normally. 4. If still NG, replace the Lamp Unit.
5	**[LAMP Indicator five blinks]** Lamp communication error.	1. Try to turn on the power several times. (Wait 5 minutes before retrying.) 2. If still NG, check that the cable between CN6005 on the Main P.C.B. and Lamp Unit is connected firmly.
8	**[LAMP Indicator eight blinks]** Cooling Fan (Lamp Fan) malfunction.	1. Check that Connector CN2753 on the Rear Jack P.C.B. is connected firmly. 2. If still NG, replace the Lamp Fan.
9	**[LAMP Indicator nine blinks]** Cooling Fan (OPT Fan) malfunction.	1. Check that Connector CN2754 on the Rear Jack P.C.B. is connected firmly. 2. If still NG, replace the OPT/TV Unit (Fan Case Unit (OPT Fan)).
10	**[LAMP Indicator ten blinks]** Cooling Fan (Front Fan or Rear Fan) malfunction.	1. Check that Connector CN2751 or CN2752 on the Rear Jack P.C.B. is connected firmly. 2. If still NG, check whether the Front Fan or Rear Fan stopped and replace it. (Note: They are same Fan.)
11	**[LAMP Indicator eleven blinks]** Cooling Fan (Rear Fan or Front Fan) malfunction.	1. Check that Connector CN2752 or CN2751 on the Rear Jack P.C.B. is connected firmly. 2. If still NG, check whether the Front Fan or Rear Fan stopped and replace it. (Note: They are same Fan.)
12	**[LAMP Indicator twelve blinks]** Rear Jack P.C.B. connection error.	1. Check that Connector CN3501 on the Rear Jack P.C.B. is connected into Connector CN3001 on the Main P.C.B. firmly.
13	**[LAMP Indicator thirteen blinks]** Abnormal Lamp input voltage (+26V) Normal: +26V Abnormal: less than +20V	1. Try to turn on the power several times. (Wait 5 minutes before retrying.) 2. If still NG, check that Connector CN1 and CN151 on the RF AMP Power Supply P.C.B. are connected firmly. 3. If still NG, unplug the AC Cord and disconnect CN151 connector cable and check voltage at Pin 1, 2 or 3 of CN151 on the RF AMP Power Supply P.C.B. **See Figure a.** If OK (+26V), replace the Lamp Unit. If NG, check the voltage between Pin 1 and Pin 2 of CN1 on the RF AMP Power Supply P.C.B. If OK (AC120V), replace the RF AMP Power Supply P.C.B. If NG, replace the Power P.C.B.

Note:

1. **Before performing troubleshooting, confirm that all connector cables are connected properly.**
2. **When repeating troubleshooting, be sure to turn the power off and unplug the AC Cord.**
3. **If the same error indication repeatedly occurs after several attempts, proceed to the next step.**



LAMP DOES NOT LIGHT UP

Plug in the AC Cord.

Turn the power on.

Is there a snap sound of the Relay turning ON ? (Relay: RL801/RL802 on the Power P.C.B.)

NO → The Power P.C.B. is defective. Replace the Power P.C.B.

YES ↓

Does the Power Indicator (D6803) on the Power Switch/Operation P.C.B. flash green?

NO → The Power P.C.B. is defective. Replace the Power P.C.B.

YES ↓

Power/Lamp Indicator flashes continuously.
Refer to "**How to solve problems indicated by the Error Indication.**"
Perform troubleshooting.

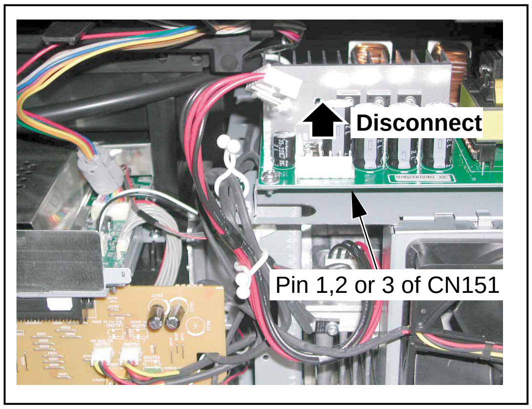
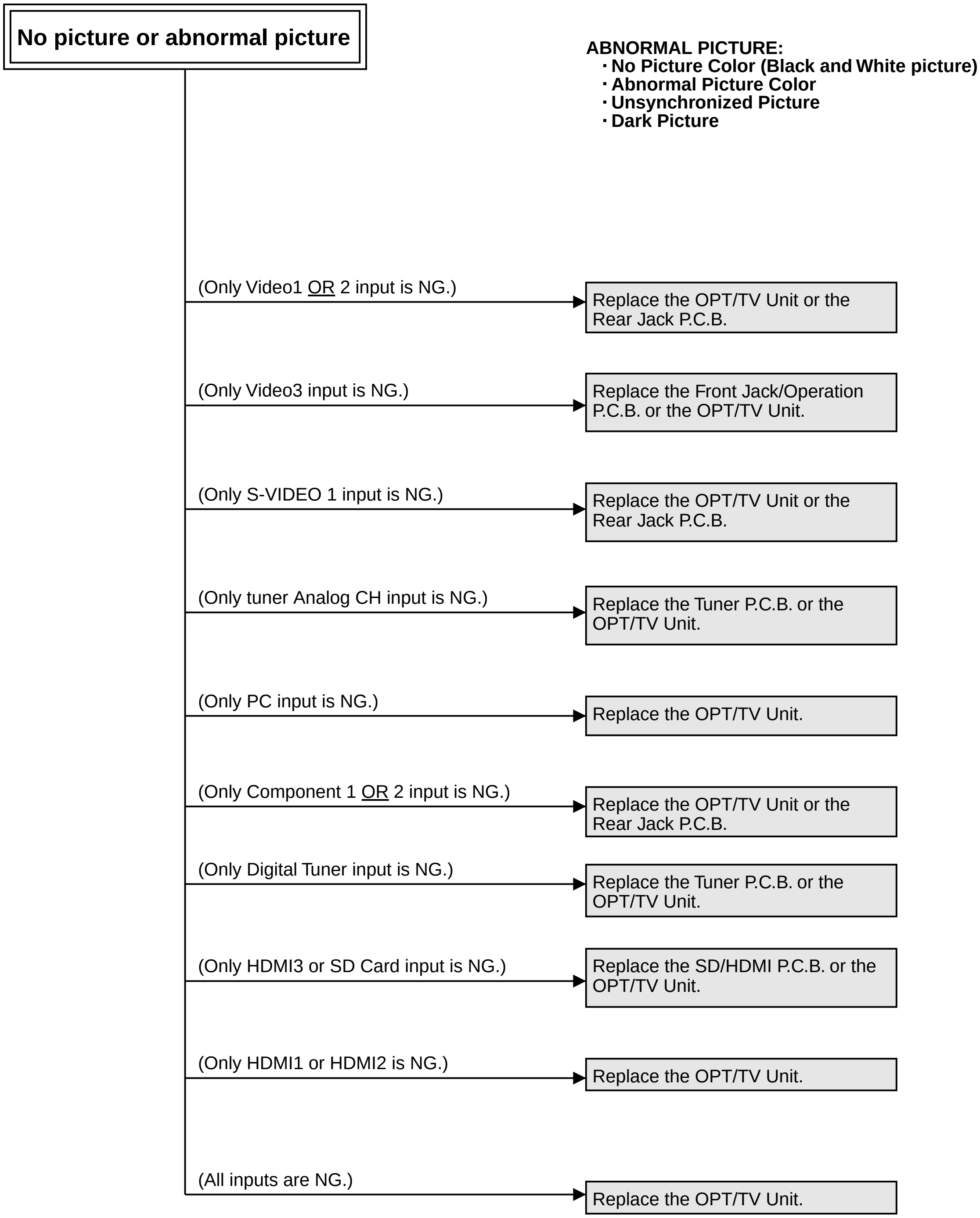


Figure. a

HOW TO DETERMINE WHICH P.C.B. IS DEFECTIVE



No picture or abnormal picture

ABNORMAL PICTURE:
- **No Picture Color (Black and White picture)**
- **Abnormal Picture Color**
- **Unsynchronized Picture**
- **Dark Picture**

(Only Video1 OR 2 input is NG.) → Replace the OPT/TV Unit or the Rear Jack P.C.B.

(Only Video3 input is NG.) → Replace the Front Jack/Operation P.C.B. or the OPT/TV Unit.

(Only S-VIDEO 1 input is NG.) → Replace the OPT/TV Unit or the Rear Jack P.C.B.

(Only tuner Analog CH input is NG.) → Replace the Tuner P.C.B. or the OPT/TV Unit.

(Only PC input is NG.) → Replace the OPT/TV Unit.

(Only Component 1 OR 2 input is NG.) → Replace the OPT/TV Unit or the Rear Jack P.C.B.

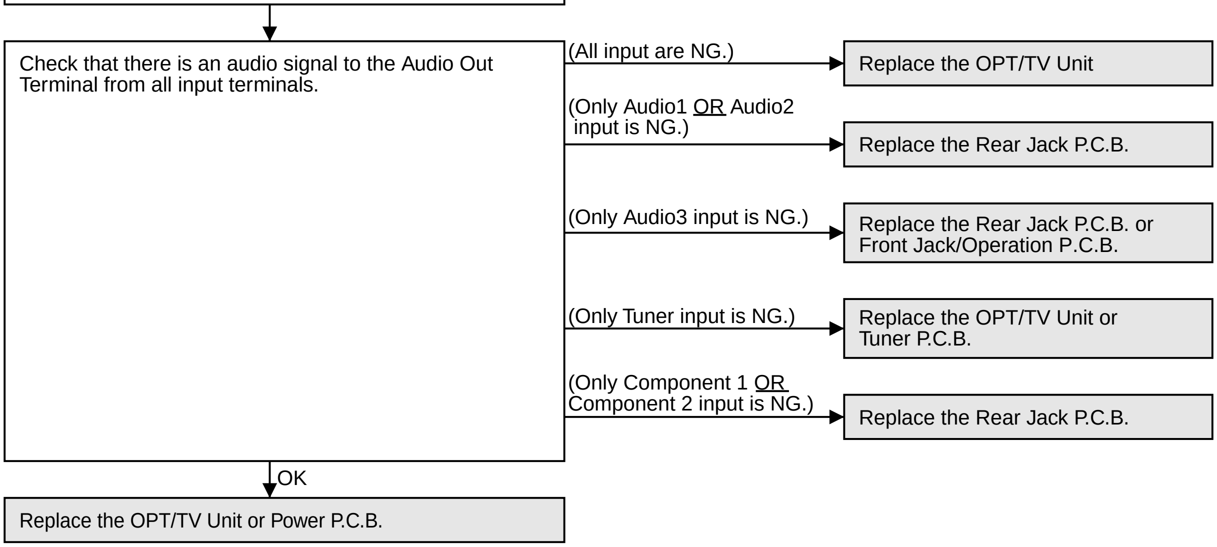
(Only Digital Tuner input is NG.) → Replace the Tuner P.C.B. or the OPT/TV Unit.

(Only HDMI3 or SD Card input is NG.) → Replace the SD/HDMI P.C.B. or the OPT/TV Unit.

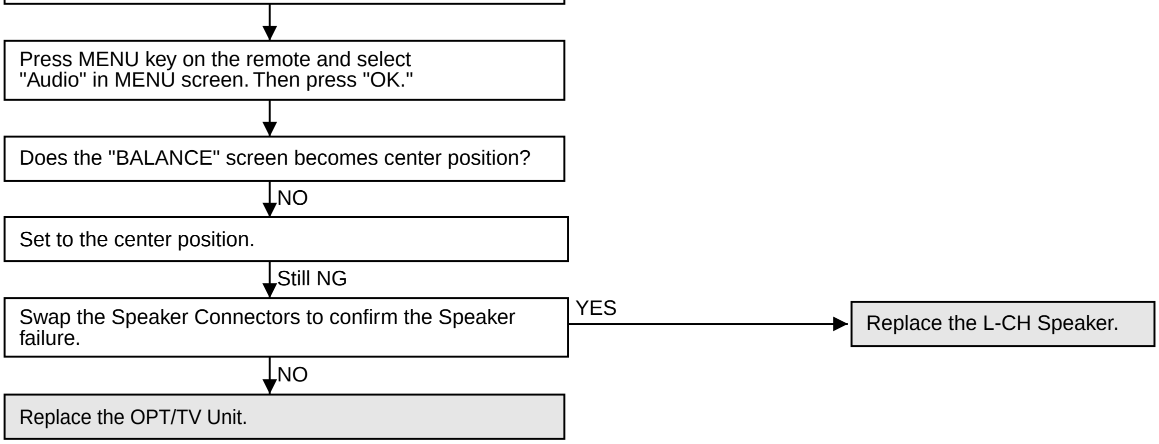
(Only HDMI1 or HDMI2 is NG.) → Replace the OPT/TV Unit.

(All inputs are NG.) → Replace the OPT/TV Unit.

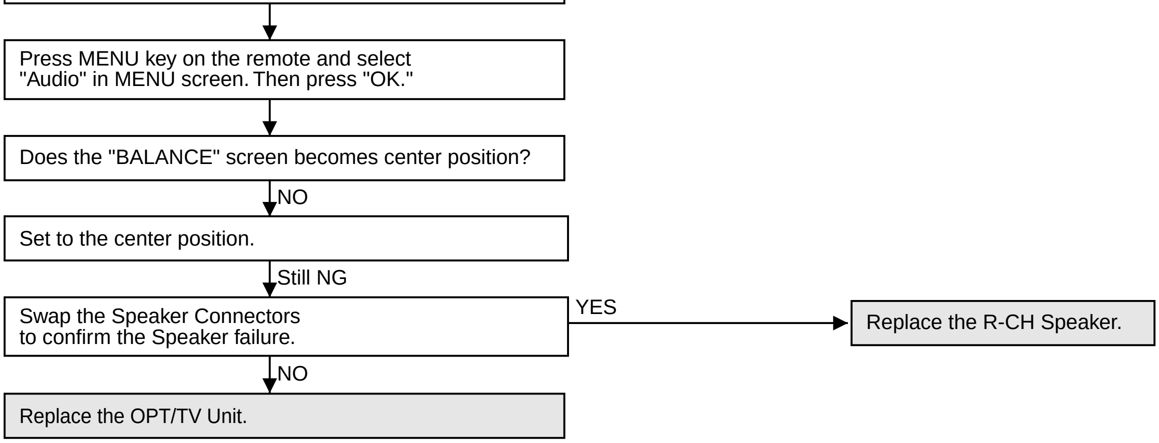
No sound from built-in both L-CH and R-CH Speakers


Check that there is an audio signal to the Audio Out Terminal from all input terminals.
(All input are NG.)
Replace the OPT/TV Unit
(Only Audio1 OR Audio2 input is NG.)
Replace the Rear Jack P.C.B.
(Only Audio3 input is NG.)
Replace the Rear Jack P.C.B. or Front Jack/Operation P.C.B.
(Only Tuner input is NG.)
Replace the OPT/TV Unit or Tuner P.C.B.
(Only Component 1 OR Component 2 input is NG.)
Replace the Rear Jack P.C.B.
OK
Replace the OPT/TV Unit or Power P.C.B.

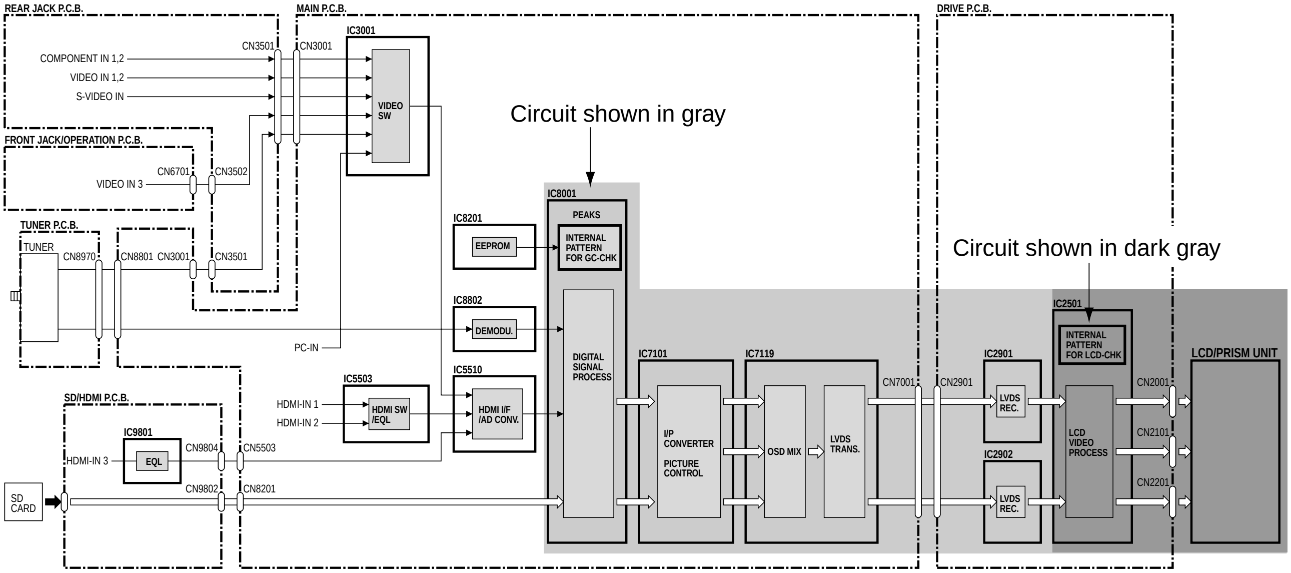
No sound from built-in L-CH Speaker only


Press MENU key on the remote and select "Audio" in MENU screen. Then press "OK."
Does the "BALANCE" screen becomes center position?
NO
Set to the center position.
Still NG
Swap the Speaker Connectors to confirm the Speaker failure.
YES
Replace the L-CH Speaker.
NO
Replace the OPT/TV Unit.

No sound from built-in R-CH Speaker only


Press MENU key on the remote and select "Audio" in MENU screen. Then press "OK."
Does the "BALANCE" screen becomes center position?
NO
Set to the center position.
Still NG
Swap the Speaker Connectors to confirm the Speaker failure.
YES
Replace the R-CH Speaker.
NO
Replace the OPT/TV Unit.

Tips for determining defective circuit in case of picture problem


REAR JACK P.C.B.
MAIN P.C.B.
DRIVE P.C.B.
COMPONENT IN 1,2
VIDEO IN 1,2
S-VIDEO IN
CN3501
CN3001
IC3001
VIDEO SW
Circuit shown in gray
FRONT JACK/OPERATION P.C.B.
CN6701
CN3502
VIDEO IN 3
TUNER P.C.B.
TUNER
CN8970
CN8801
CN3001
CN3501
IC8201
EEPROM
IC8001
PEAKS
INTERNAL PATTERN FOR GC-CHK
IC8802
DEMODU.
PC-IN
DIGITAL SIGNAL PROCESS
IC5503
HDMI SW /EQL
IC5510
HDMI I/F /AD CONV.
HDMI-IN 1
HDMI-IN 2
SD/HDMI P.C.B.
IC9801
EQL
HDMI-IN 3
CN9804
CN5503
CN9802
CN8201
SD CARD
IC7101
I/P CONVERTER
PICTURE CONTROL
IC7119
OSD MIX
LVDS TRANS.
CN7001
CN2901
IC2901
LVDS REC.
IC2902
LVDS REC.
Circuit shown in dark gray
IC2501
INTERNAL PATTERN FOR LCD-CHK
LCD VIDEO PROCESS
CN2001
CN2101
CN2201
LCD/PRISM UNIT

Display the internal pattern for "LCD-CHK" in Service Adjust Mode.
Refer to "HOW TO DISPLAY THE INTERNAL PATTERN FOR LCD-CHK" as shown in Figure A.

→ If the internal pattern is OK, the circuit shown in dark gray can be judged OK.

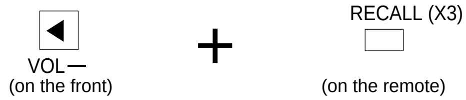
Display the internal pattern for "GC-CHK" in Service Adjust Mode.
Refer to "HOW TO DISPLAY THE INTERNAL PATTERN FOR GC-CHK" as shown in Figure B.

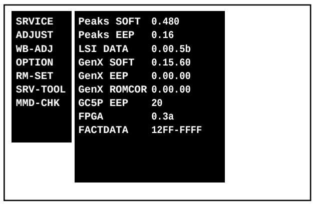
→ If the internal pattern is OK, the circuit shown in gray can be judged OK.

HOW TO DISPLAY THE INTERNAL PATTERN

Service Adjust Mode

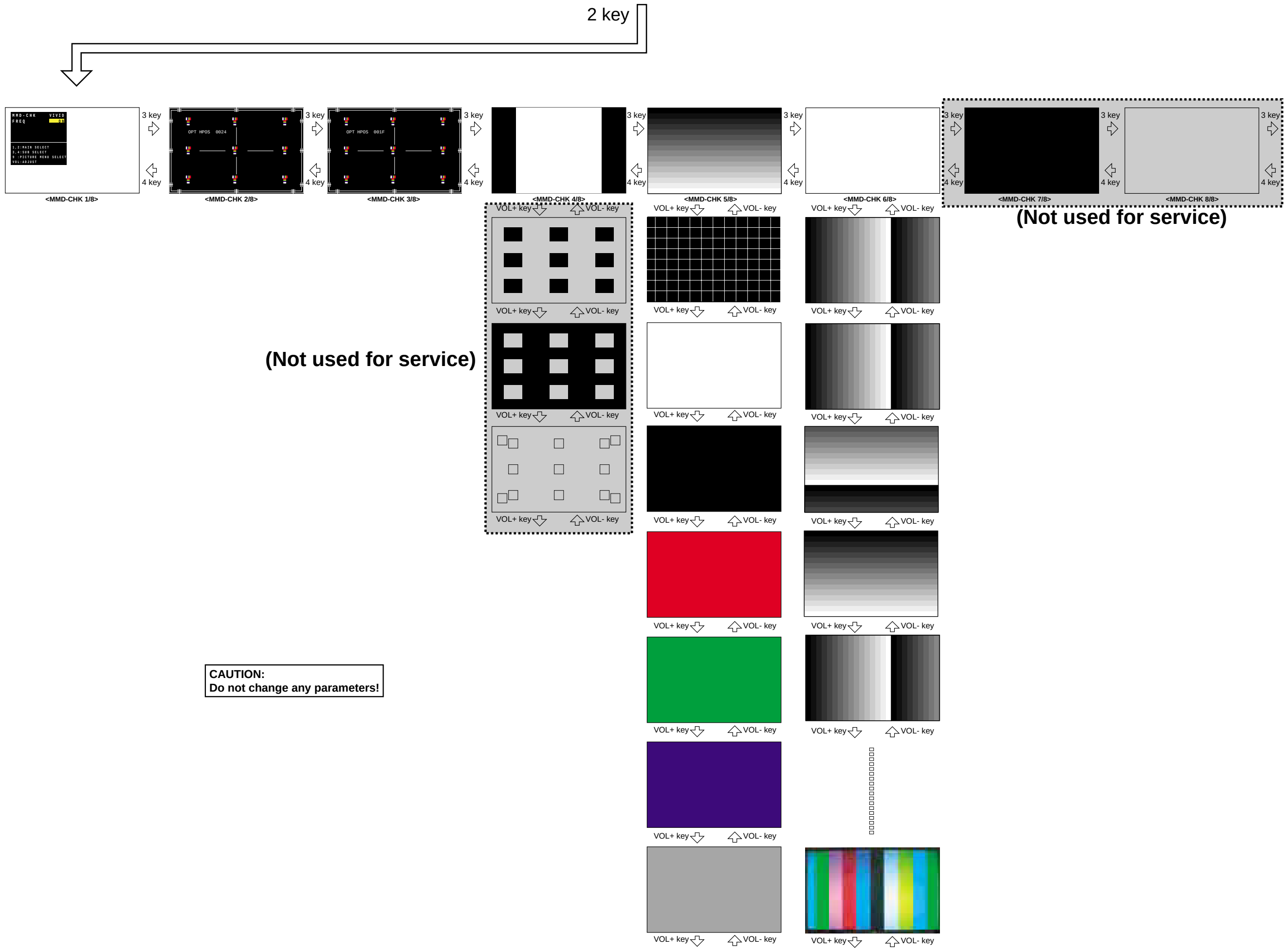
Enter:
VOLUME DOWN button + RECALL key (3 times)
(in power on condition)


RECALL (X3)
+
VOL–
(on the front)
(on the remote)



```
SRVICE      Peaks SOFT  0.480
ADJUST      Peaks EEP   0.16
WB-ADJ      LSI DATA    0.00.5b
OPTION      GenX SOFT   0.15.60
RM-SET      GenX EEP    0.00.00
SRV-TOOL    GenX ROMCOR 0.00.00
MMD-CHK     GC5P EEP    20
            FPGA        0.3a
            FACTDATA    12FF-FFFF
```

<Main Menu>


2 key
MMD-CHK VIVID
FREQ ON
1,2:MAIN SELECT
3,4:SUB SELECT
9 :PICTURE MENU SELECT
VOL:ADJUST
OPT HPOS 0024
OPT HPOS 001F
3 key
4 key
<MMD-CHK 1/8>
<MMD-CHK 2/8>
<MMD-CHK 3/8>
<MMD-CHK 4/8>
<MMD-CHK 5/8>
<MMD-CHK 6/8>
<MMD-CHK 7/8>
<MMD-CHK 8/8>
VOL+ key
VOL- key

(Not used for service)

(Not used for service)

CAUTION:
Do not change any parameters!

Internal Pattern for LCD-CHK (Figure. A)

Internal Pattern for GC-CHK (Figure. B)

7 Disassembly and Assembly Instructions

7.1. Cabinet Section

DISASSEMBLY METHOD OF CABINET SECTION

Cabinet section contains following removal procedures:

HOW TO REPLACE THE LAMP UNIT

a. Removal of Rear Cover
b. Removal of OPT/TV Unit
c. Removal of Lamp Shield Case Ass'y with Fans
d. Removal of Lamp Unit
e. Removal of Lamp Fan

REMOVAL OF THE OPT/TV UNIT

REMOVAL OF THE RF AMP POWER SUPPLY P.C.B.

REMOVAL OF THE FRONT FAN AND THE REAR FAN

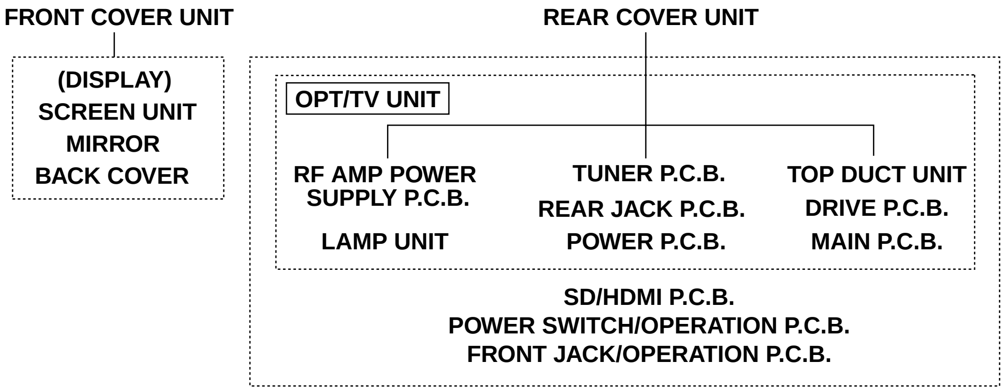
REMOVAL OF THE TUNER P.C.B., THE REAR JACK P.C.B. AND THE POWER P.C.B.

REMOVAL OF THE FRONT COVER UNIT AND THE DISPLAY

REMOVAL OF THE SCREEN UNIT FROM THE DISPLAY

DISASSEMBLY FLOWCHART

This flow chart indicates the disassembly steps of the cabinet parts and the P.C.Boards in order to gain access to item (s) to be serviced. When reassembling, perform the step (s) in the reverse order. Bend, route and dress the wires as they were originally.


FRONT COVER UNIT
(DISPLAY)
SCREEN UNIT
MIRROR
BACK COVER
REAR COVER UNIT
OPT/TV UNIT
RF AMP POWER SUPPLY P.C.B.
LAMP UNIT
TUNER P.C.B.
REAR JACK P.C.B.
POWER P.C.B.
TOP DUCT UNIT
DRIVE P.C.B.
MAIN P.C.B.
SD/HDMI P.C.B.
POWER SWITCH/OPERATION P.C.B.
FRONT JACK/OPERATION P.C.B.

Note:
The optical parts will be exposed to the dust in the air when the Top Duct Unit is removed. Therefore, it is strongly recommend to remove the Top Duct Unit only in a clean room.

Note :
a. Place a cloth or some other soft material under the P.C. Boards or Unit to prevent damage.
b. When reinstalling, ensure that the connectors are connected firmly and electrical components have not been damaged.
c. Do not supply power to the unit during disassembly and reassembly.

HOW TO REPLACE THE LAMP UNIT

Note:
Lamp debris may be noticed in the lamp compartment area after the rear cover is removed.
If present, follow the notes in the disassembly procedure.
if not, disregard these notes.

LAMP CAUTION:

The Lamp Unit becomes very hot during operation. When replacing the Lamp Unit, wait until it has cooled off (1 hour or more).

a. Removal of Rear Cover

1. Remove the Rear Cover by removing the 12 screws then pinching the 3 latch tabs.

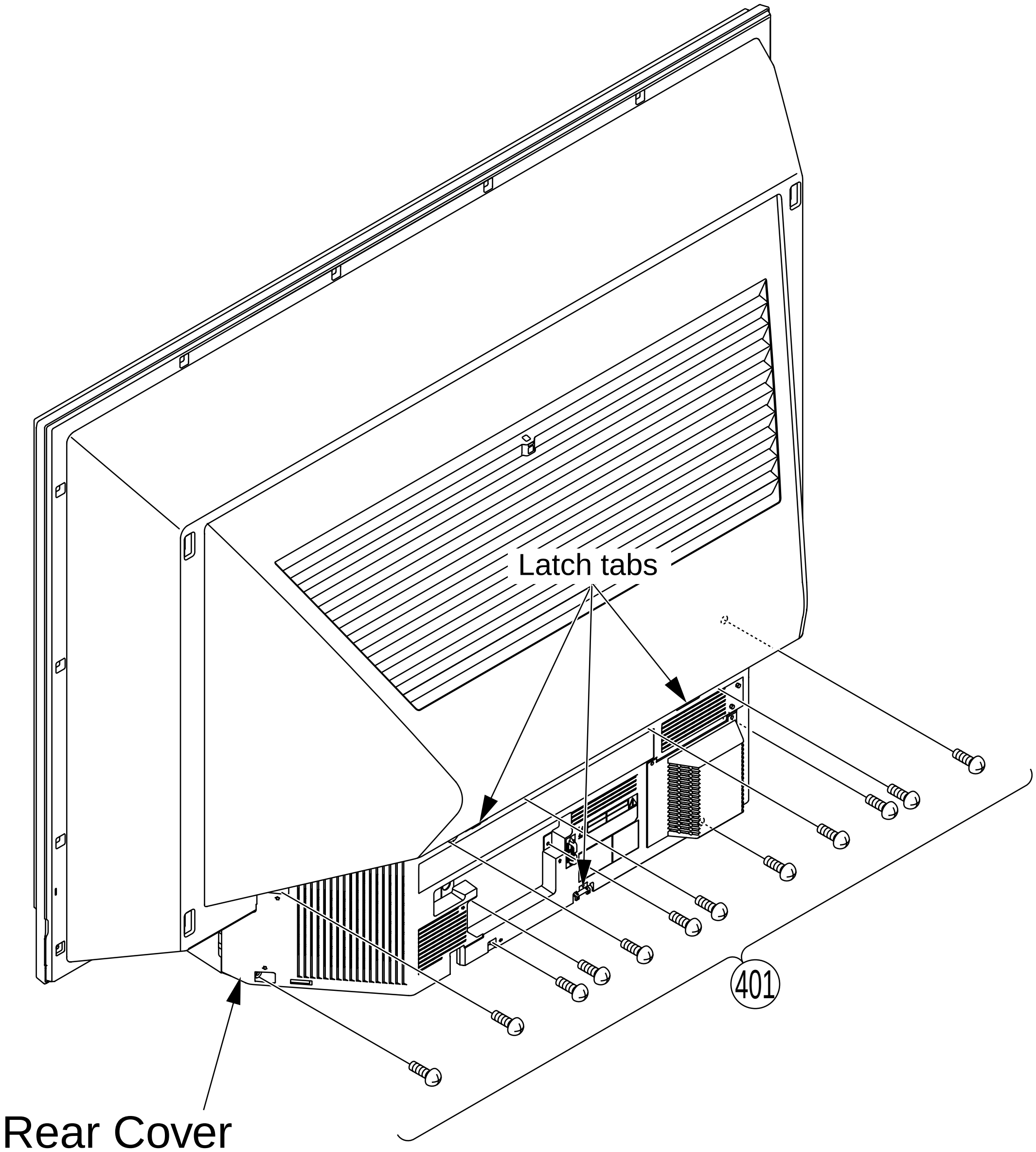


Fig. D1-1

Before trying to remove the OPT/TV Unit, check the area under the Lamp shown by the arrow in the following picture.

Note: If debris is present, clean the debris with a vacuum cleaner.

(1) Spread blanket or drop cloth (or similar material) on the floor to collect the debris that may fall during the removal of the OPT/TV Unit and the Lamp Unit.

(2) Vacuum the debris thoroughly.

b. Removal of OPT/TV Unit

1. Remove the right Support Shield by releasing the Locking Tab.
2. 1) Remove the 4 screws.
   2) Disconnect Connectors CN3502 (Ope), CN4501 (Speaker), CN5503 (SD), CN6003 (Power SW) and CN8201 (HDMI).

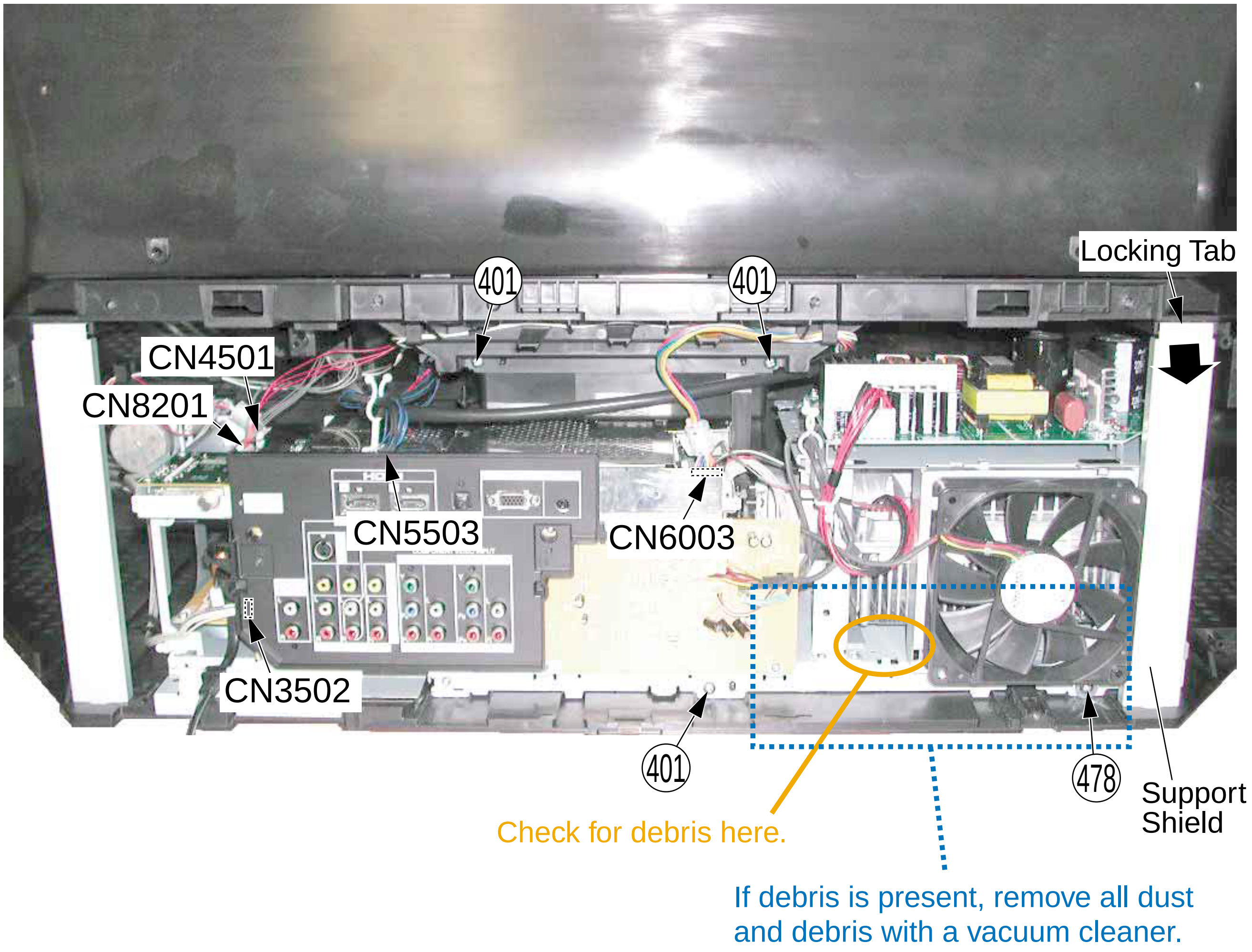
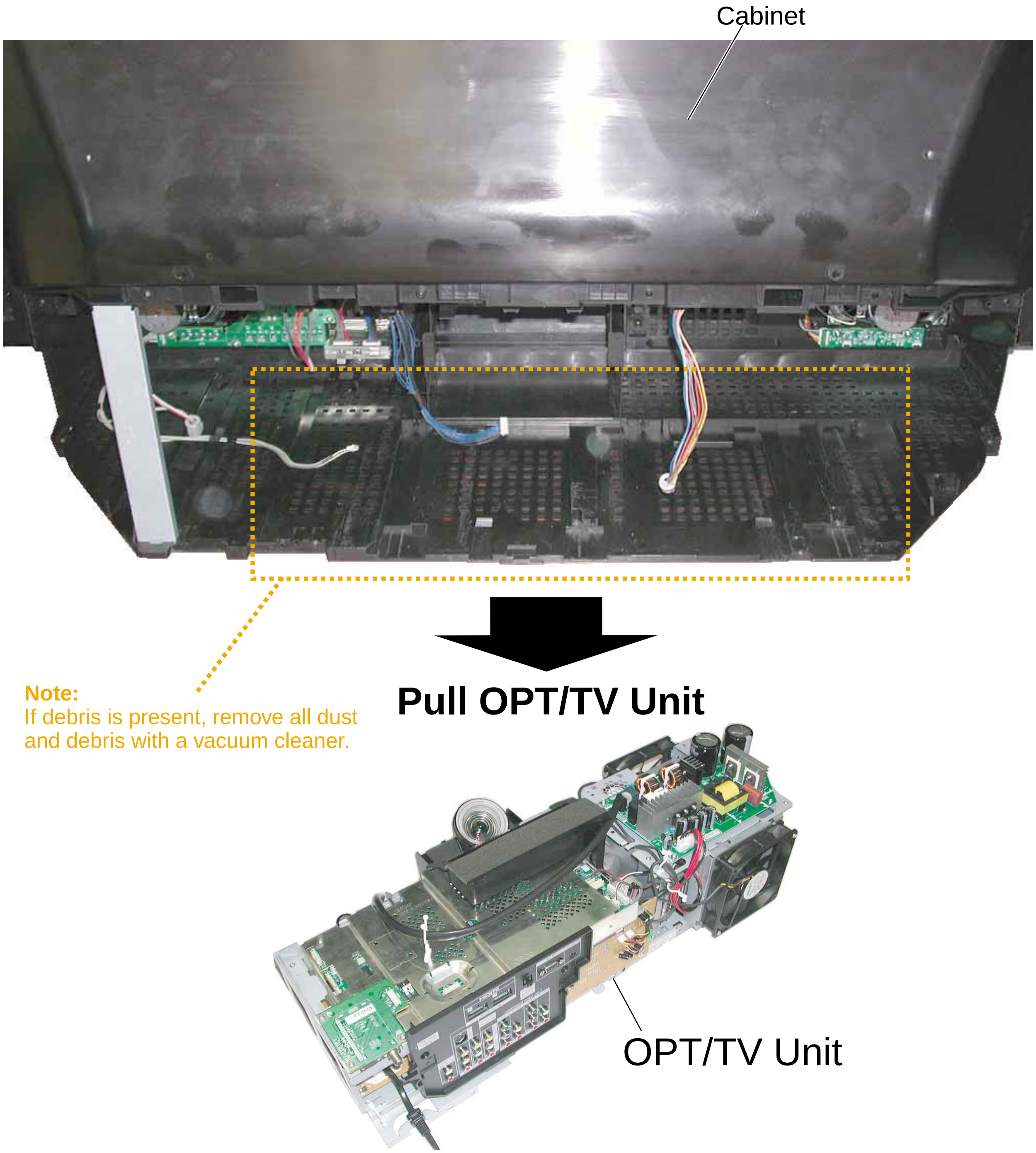

Locking Tab
401
401
CN4501
CN8201
CN5503
CN6003
CN3502
401
478
Support Shield
Check for debris here.
If debris is present, remove all dust and debris with a vacuum cleaner.

Fig. D1-2

Replacement Note of OPT/TV Unit:
After replacing the OPT/TV Unit, be sure to perform "ADJUSTMENT of OPT/TV Unit." Refer to "WHEN INSTALLING THE OPT/TV UNIT INTO THE UNIT AT THE USER'S LOCATION:."

3) Pull out the OPT/TV Unit.


Cabinet
Pull OPT/TV Unit
OPT/TV Unit

Note:
If debris is present, remove all dust and debris with a vacuum cleaner.

Fig. D1-3

c. Removal of Lamp Shield Case Ass’y with Fans

1. Remove the Thermal Fuse by removing the screw, and disconnect Connector CN1102.
2. Disconnect Connectors CN1, CN151, CN2751, CN2752, CN2753, CN6005 and release from the clampers.

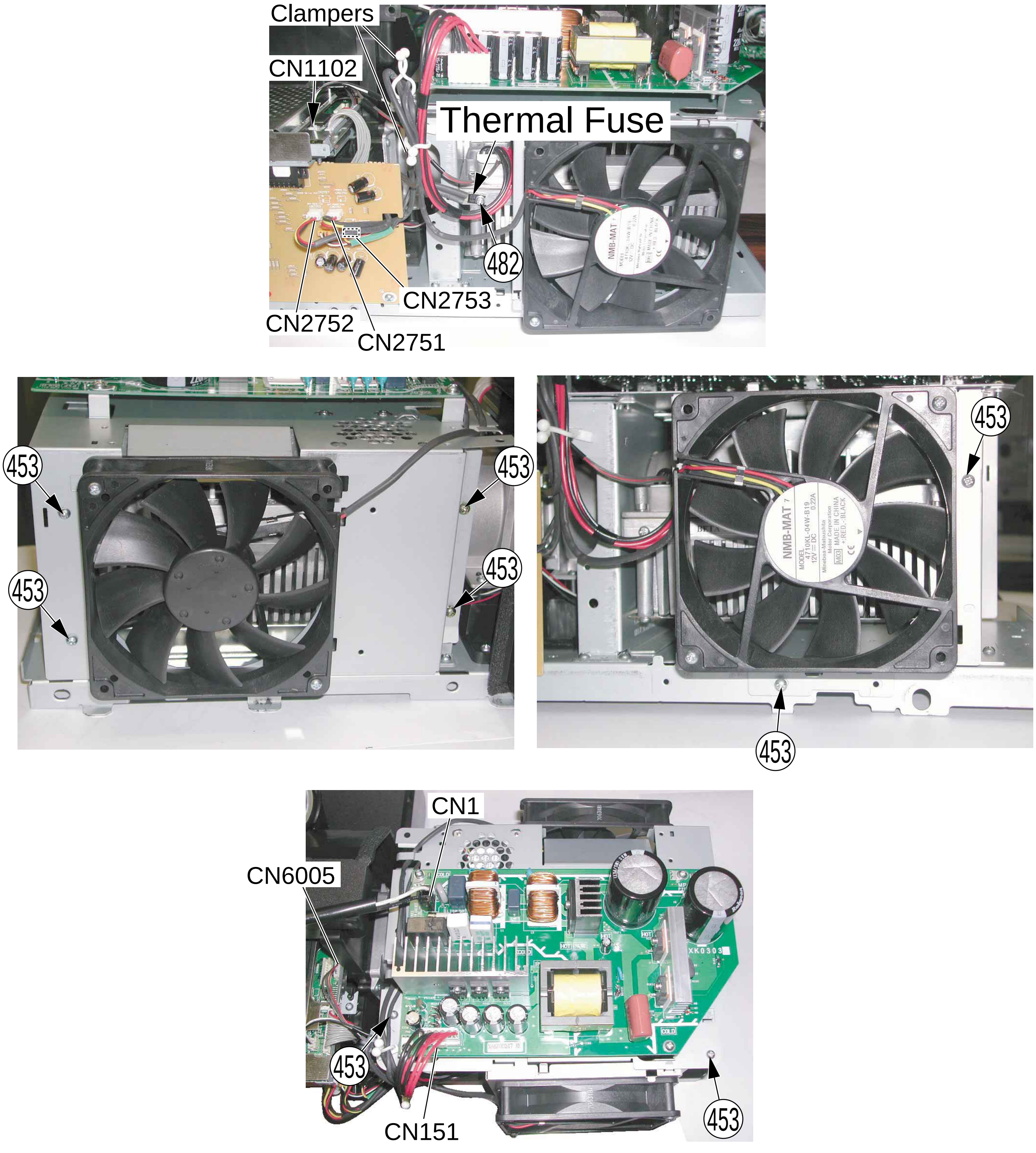
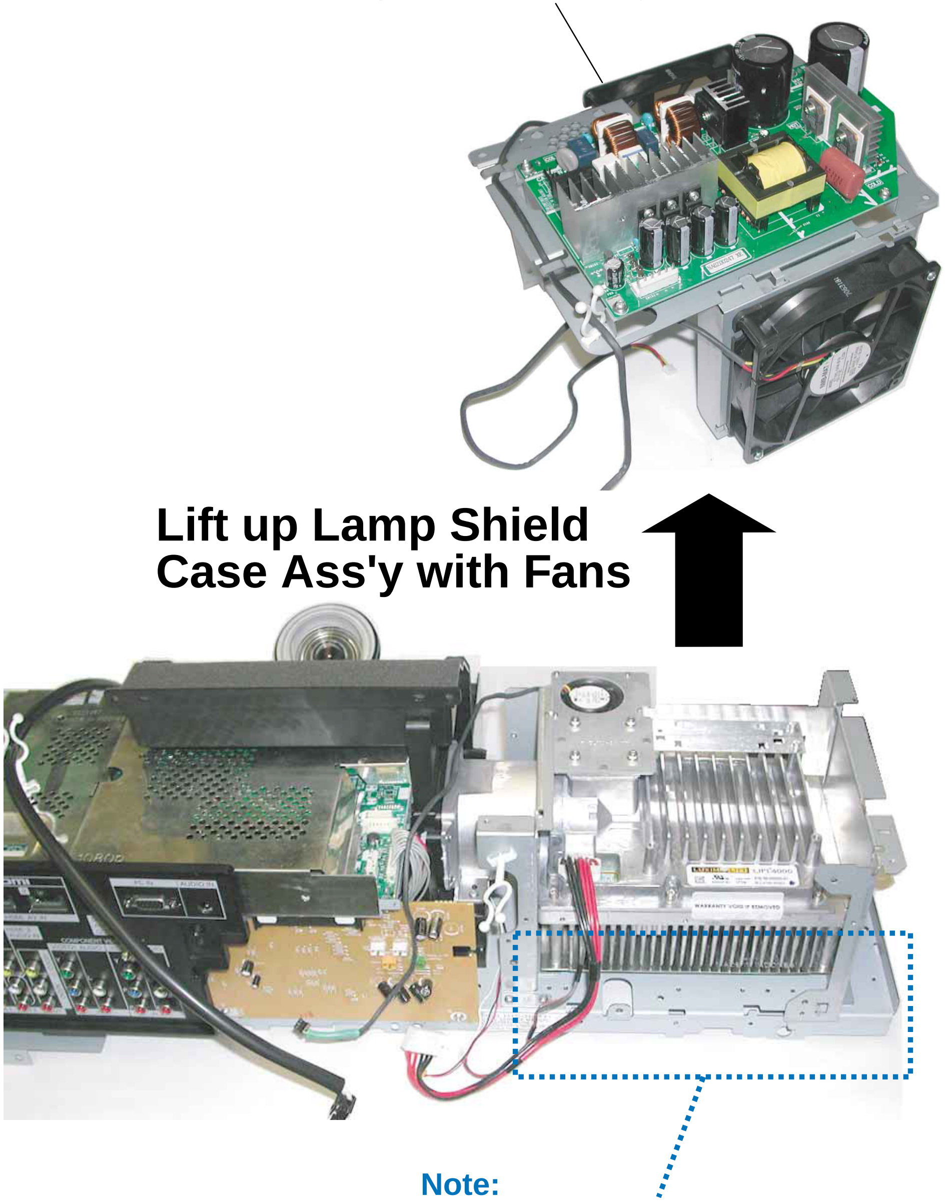

Clampers
CN1102
Thermal Fuse
482
CN2753
CN2752
CN2751
453
453
453
453
453
453
CN1
CN6005
453
CN151
453

Fig. D1-4

3. Remove the Lamp Shield Case Ass’y with Fans by removing the 8 screws.



Lamp Shield Case Ass'y with Fans

Lift up Lamp Shield Case Ass'y with Fans

Note:
Clean the surface of the plate under the Lamp with a vacuum cleaner.

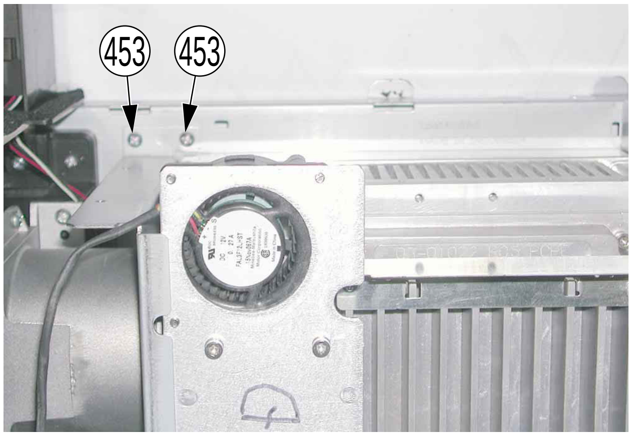
Fig. D1-5

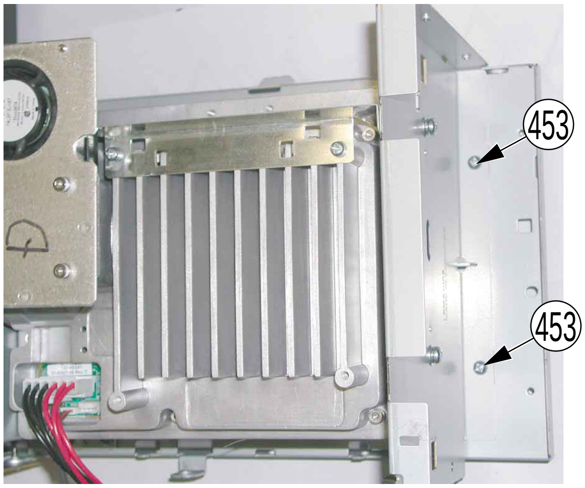
d. Removal of Lamp Unit

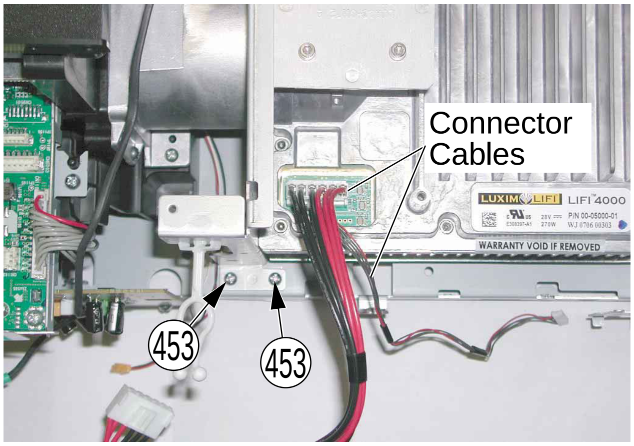
1. Disconnect two connector cables from the Lamp Ass’y.
2. Remove the Lamp Ass’y by removing the 6 screws.

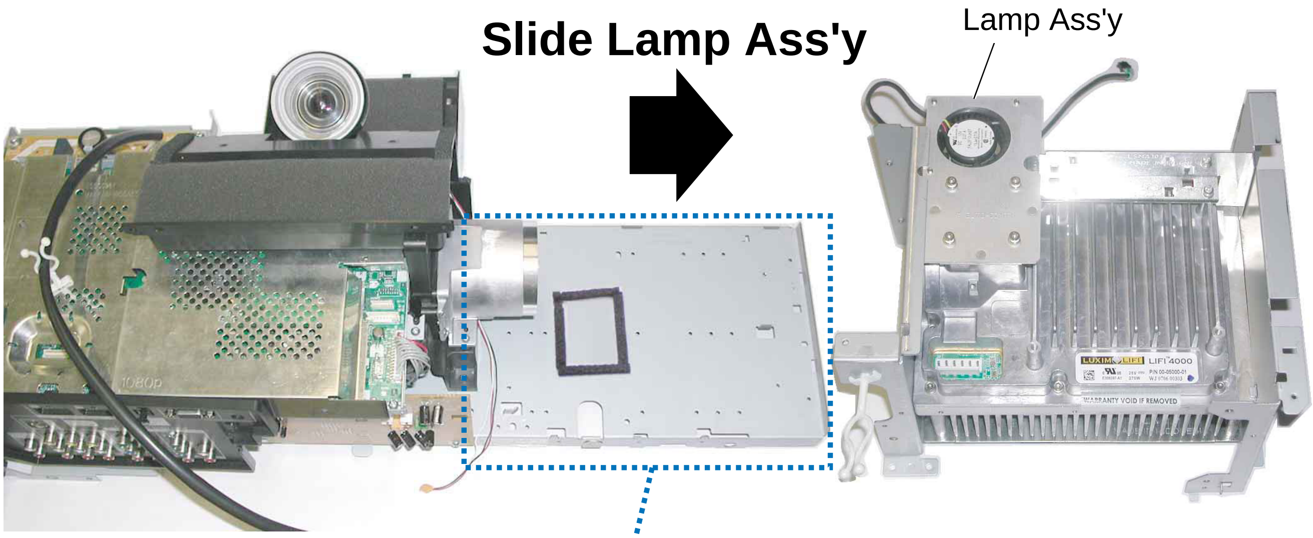
LAMP CAUTION:

The Lamp Unit becomes very hot during operation. When replacing the Lamp Unit, wait until it has cooled off (1 hour or more).





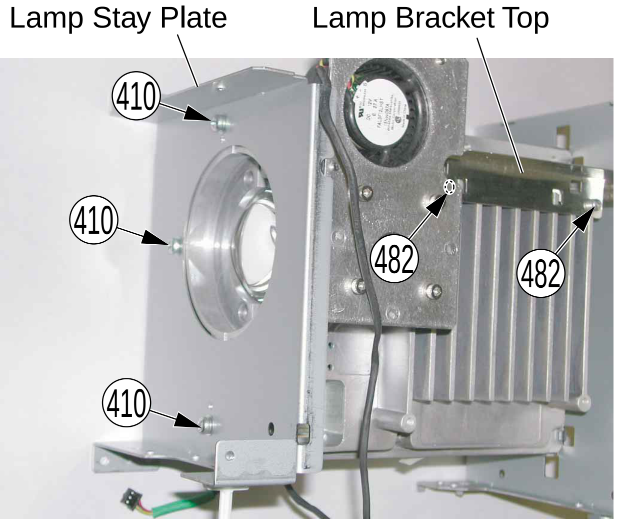

Connector Cables
LUXIM LIFI LIFI 4000
WARRANTY VOID IF REMOVED
453
453

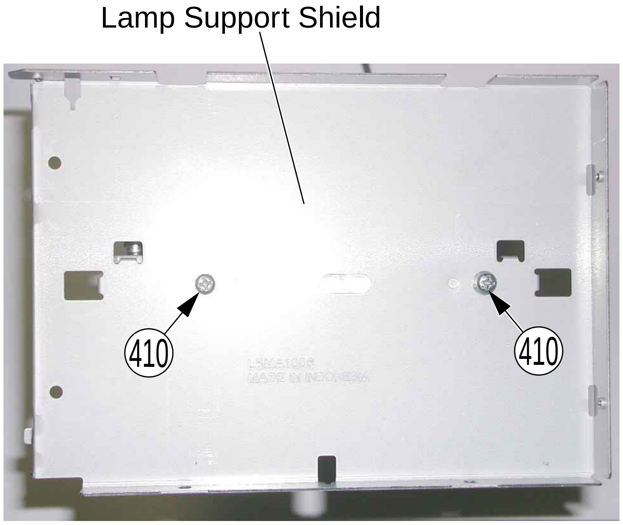

Slide Lamp Ass'y
Lamp Ass'y

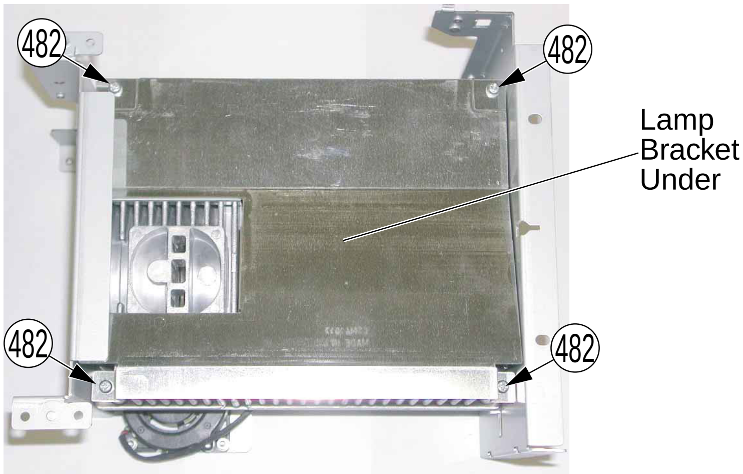
Note:
Clean the surface of the plate with a vacuum cleaner, after removing the Lamp Unit.

Fig. D1-6

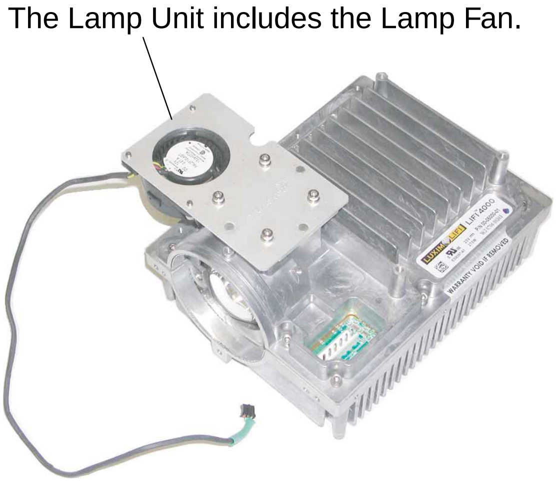
3. Remove the 4 plates (Lamp Stay Plate, Lamp Bracket Top, Lamp Support Shield and Lamp Bracket Under) by removing the 11 screws.


Lamp Stay Plate
Lamp Bracket Top
410
410
410
482
482


Lamp Support Shield
410
410


482
482
Lamp Bracket Under
482
482

<Lamp Unit>


The Lamp Unit includes the Lamp Fan.

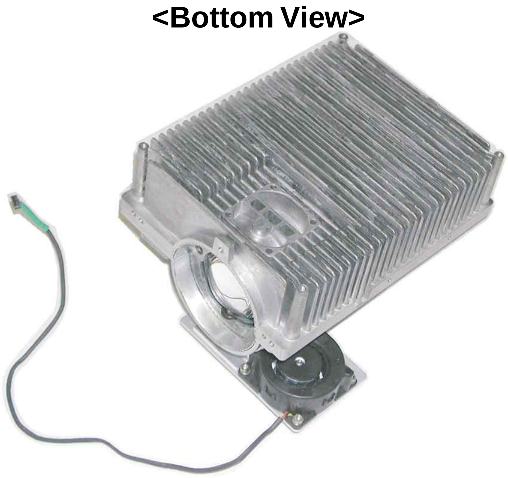

<Bottom View>

Fig. D1-7

e. Removal of Lamp Fan

1. Remove the Lamp Fan from the Lamp Ass'y by removing the 7 screws using the Hex Wrench (2.5 mm).

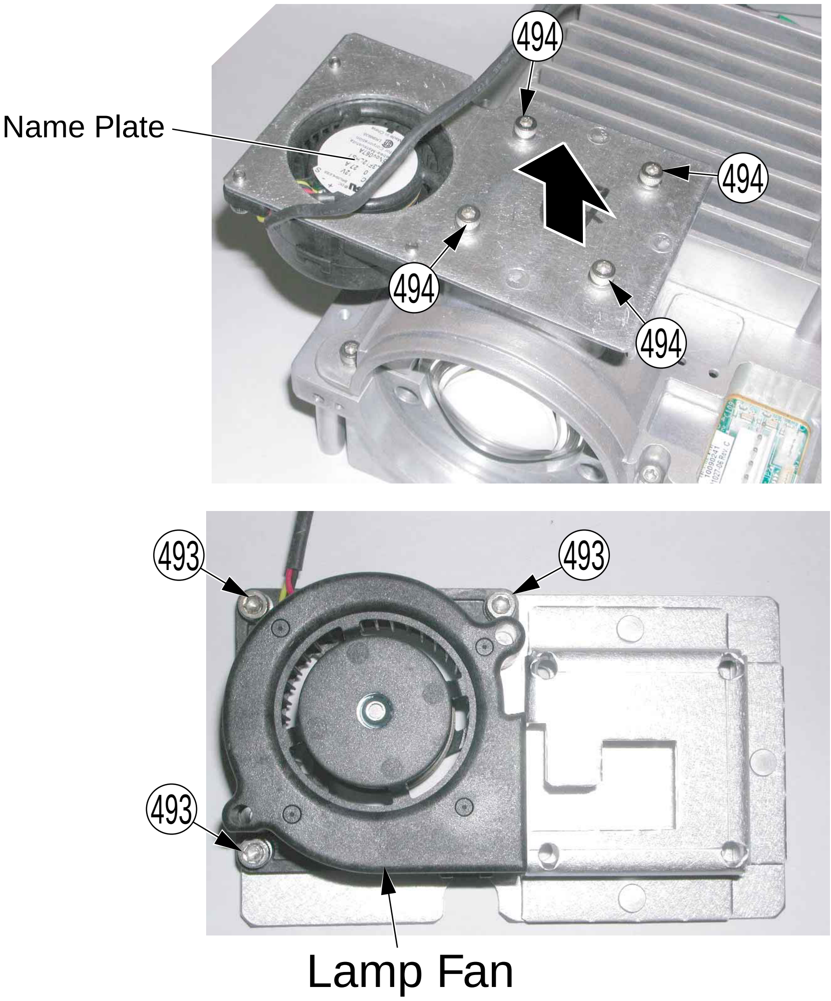

494
Name Plate
494
494
494
493
493
493
Lamp Fan

Fig. D1-8

Reassembly Note for Lamp Shield Case Ass’y:
Before installing the Lamp Shield Case Ass’y with Fans, wire the Lamp Fan Cable and the Front Fan Cable as shown.

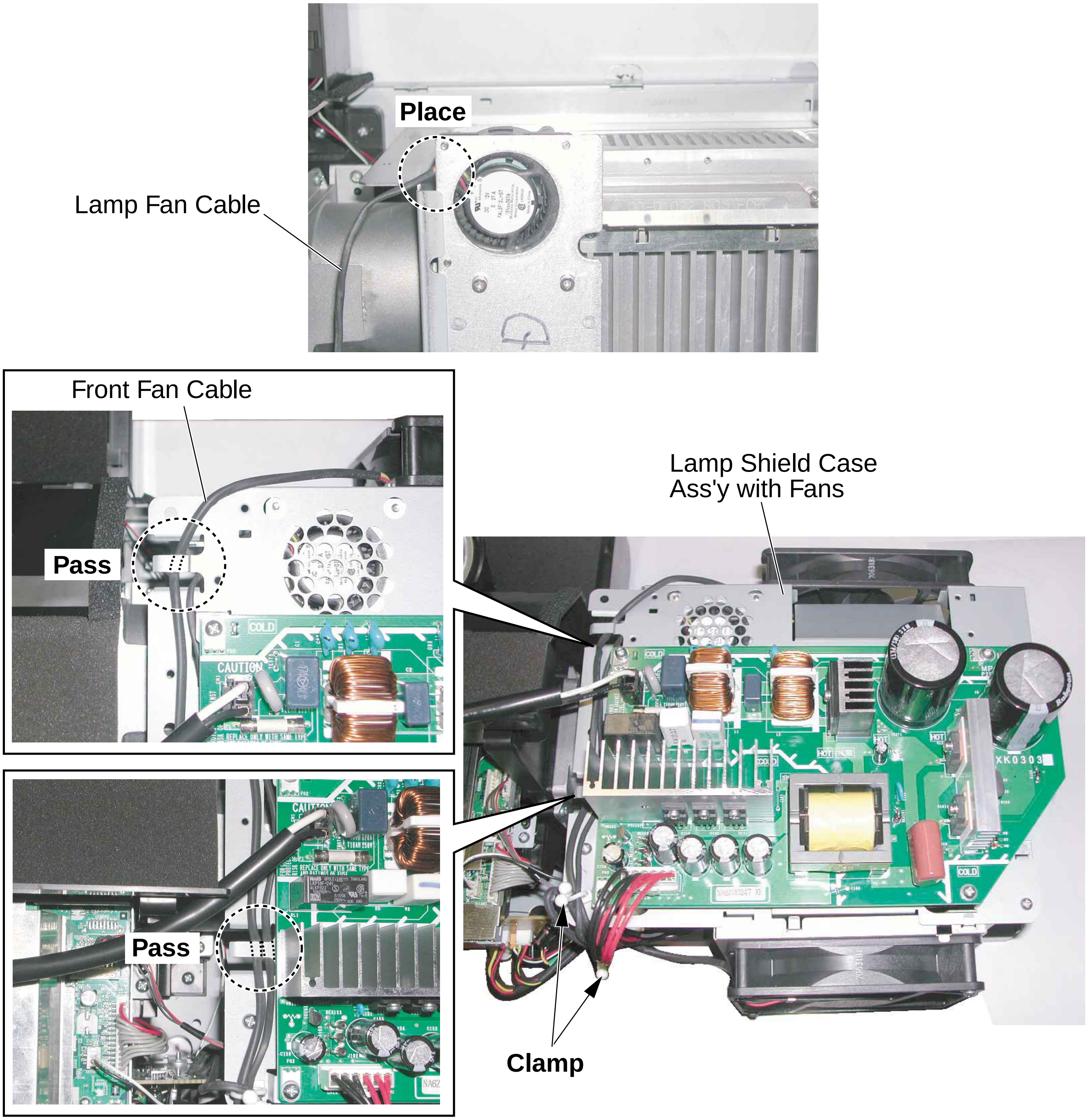

Place
Lamp Fan Cable
Front Fan Cable
Pass
Pass
Lamp Shield Case Ass'y with Fans
Clamp

Fig. D1-9

REMOVAL OF THE OPT/TV UNIT

1. Remove the right Support Shield by releasing the Locking Tab.
2. 1) Remove the 4 screws.
   2) Disconnect Connectors CN3502 (Ope), CN4501 (Speaker), CN5503 (SD), CN6003 (Power SW) and CN8201 (HDMI).

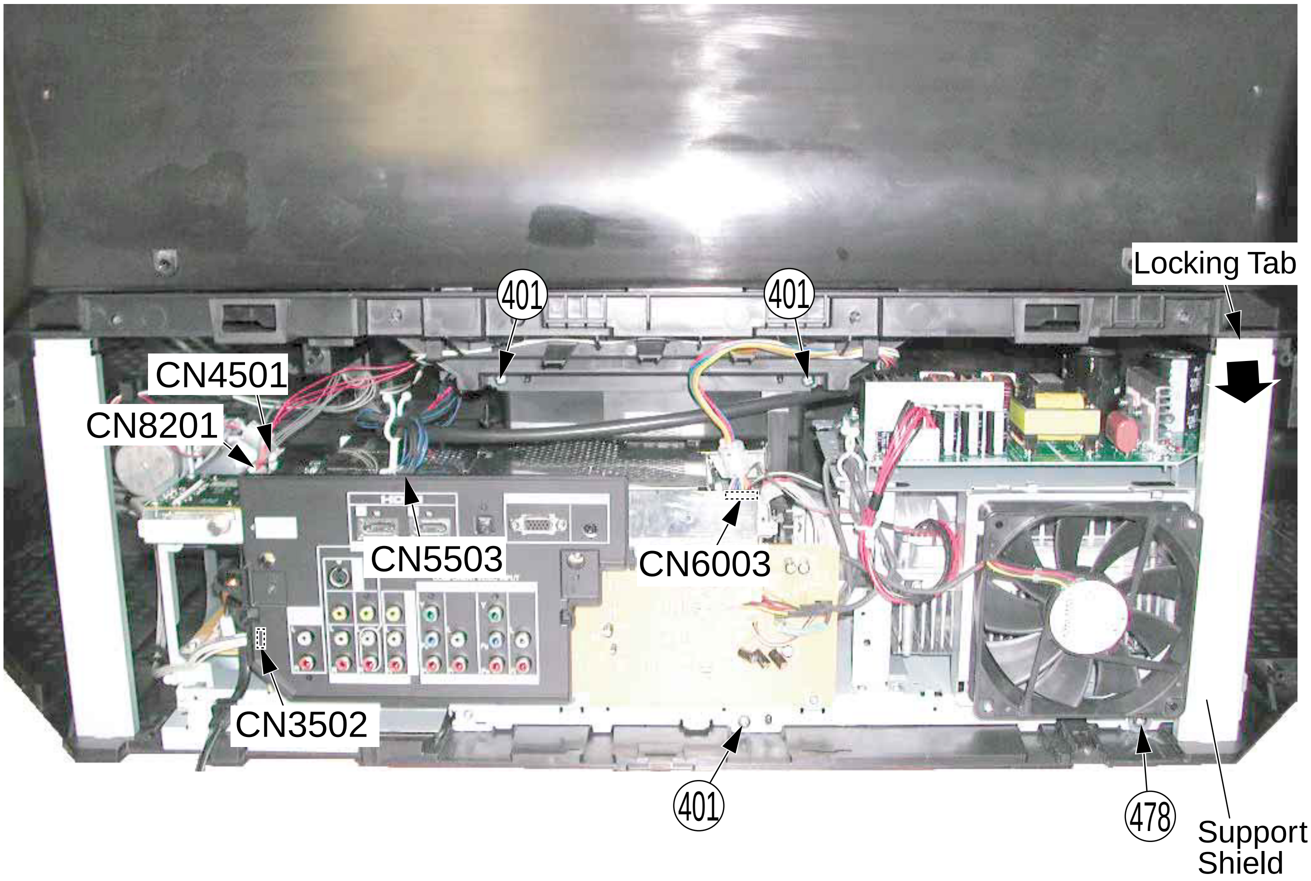

Locking Tab
401
401
CN4501
CN8201
CN5503
CN6003
CN3502
401
478
Support Shield

Fig. D2-1

3) Pull out the OPT/TV Unit.

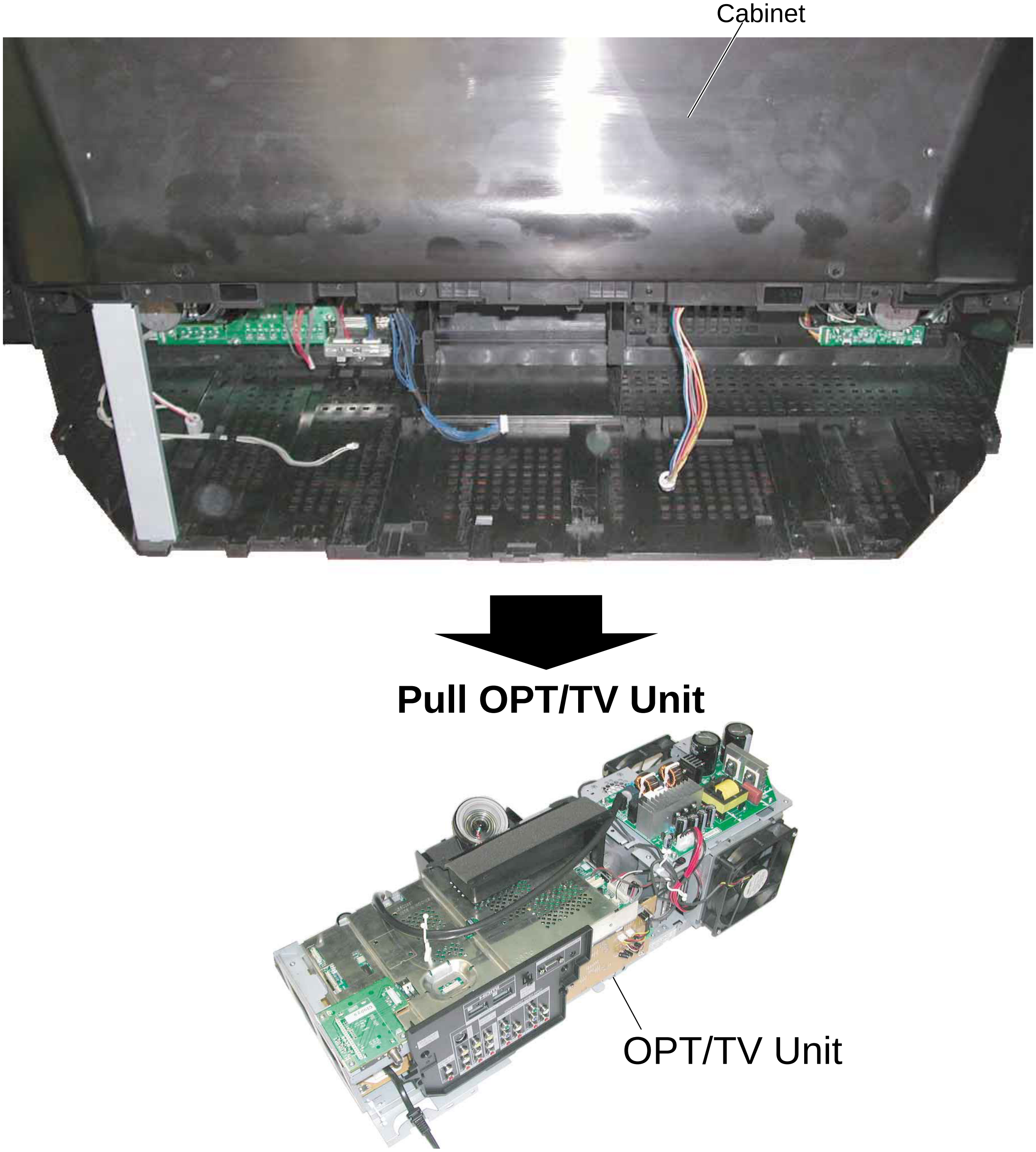

Cabinet
Pull OPT/TV Unit
OPT/TV Unit

Fig. D2-2

REMOVAL OF THE RF AMP POWER SUPPLY P.C.B.

1. Remove the OPT/TV Unit. Refer to Steps 1~2 in "REMOVAL OF THE OPT/TV UNIT."
2. 1) Disconnect Connectors CN151, CN1 on the RF AMP Power Supply P.C.B.
   2) Remove the RF AMP Power Supply P.C.B. by removing the 4 screws and the spacer.

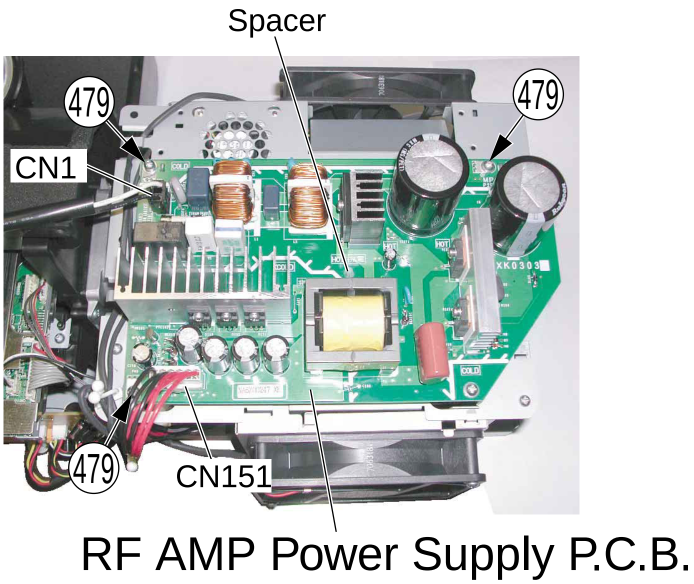

Spacer
479
479
CN1
479
CN151
RF AMP Power Supply P.C.B.

Fig. D3-1

REMOVAL OF THE FRONT FAN AND THE REAR FAN

1. Remove the OPT/TV Unit. Refer to Steps 1~2 in "REMOVAL OF THE OPT/TV UNIT."
2. Disconnect Connector CN2752 and remove the Rear Fan by removing the 2 screws.
3. Disconnect Connector CN2751 and remove the Front Fan by removing the 2 screws.

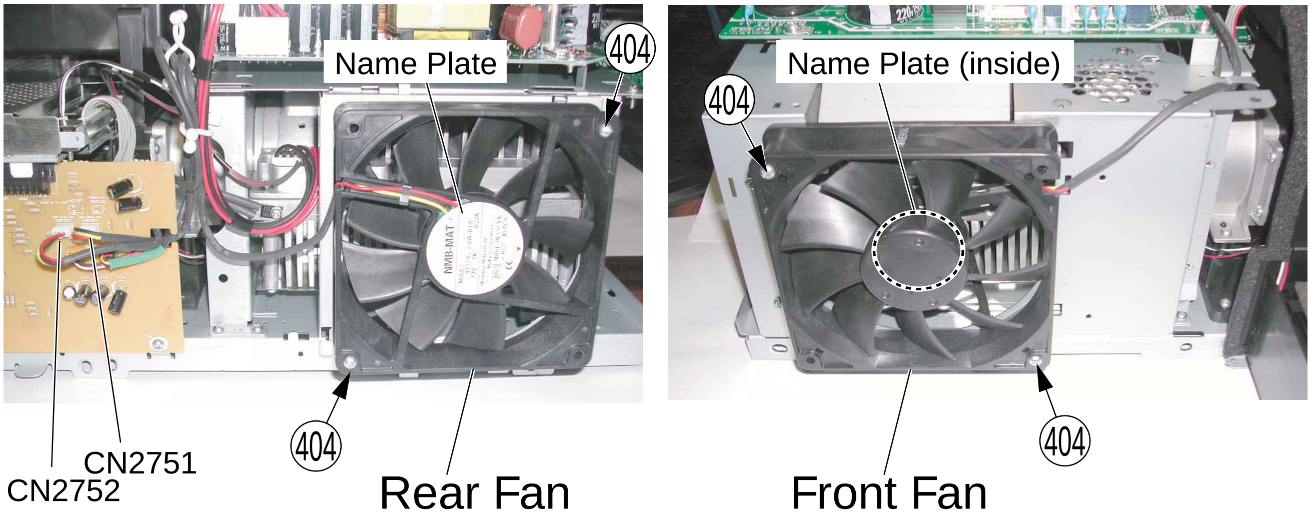

Name Plate
404
404
CN2751
CN2752
Rear Fan
Name Plate (inside)
404
404
Front Fan

Fig. D3-2

REMOVAL OF THE TUNER P.C.B., THE REAR JACK P.C.B. AND THE POWER P.C.B.

1. Remove the OPT/TV Unit. Refer to Steps 1~2 in "REMOVAL OF THE OPT/TV UNIT."
2. Remove the Tuner P.C.B. by removing the 3 screws (CN8970 is disconnected).
3. 1) Remove the Rear Jack Holder by removing the 6 screws.
   2) Disconnect Connectors CN2751, CN2752, CN2753, CN2754.
   3) Disconnect Connector CN3501 and remove the Rear Jack P.C.B. by removing the 5 screws.

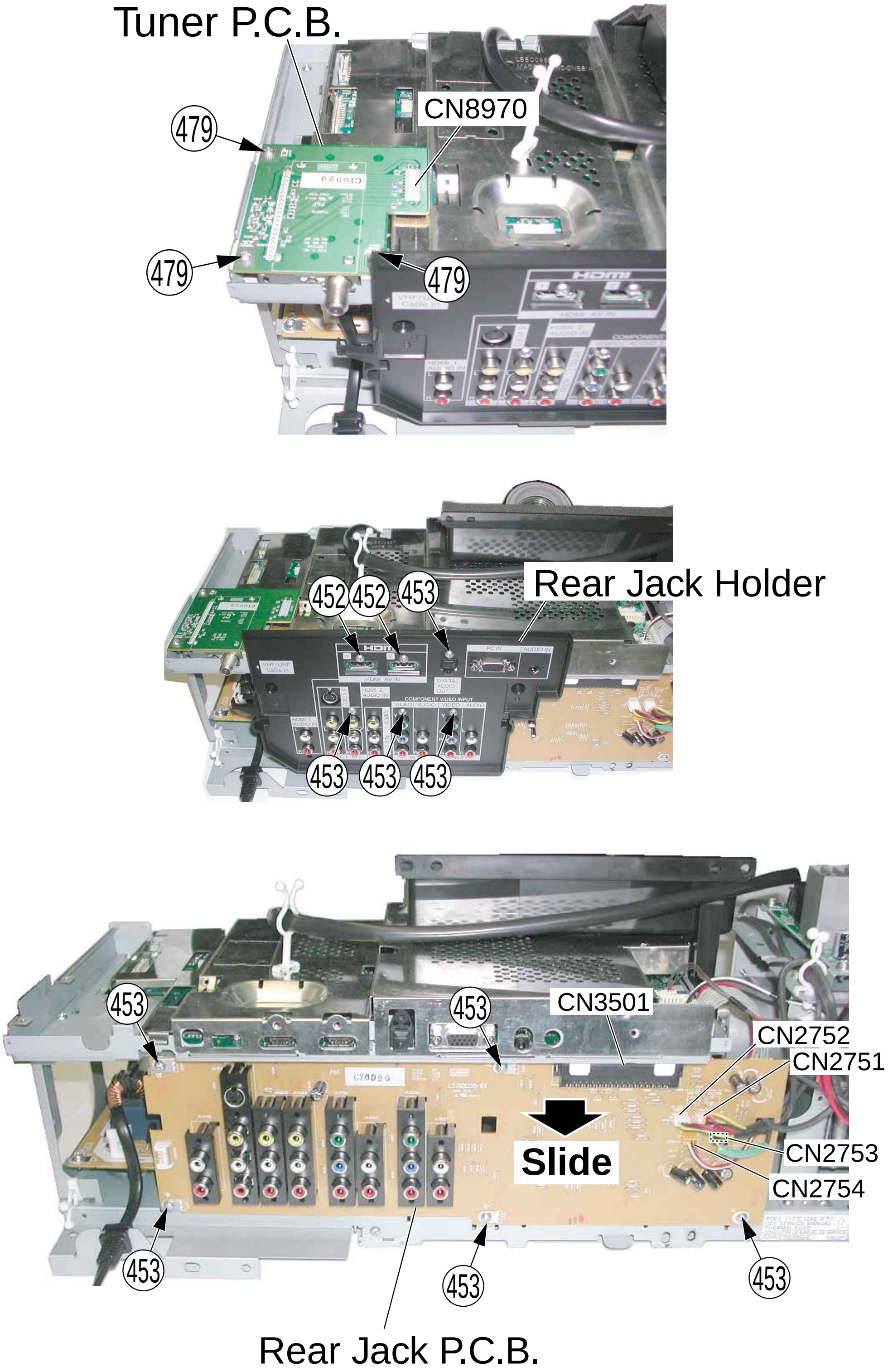

Tuner P.C.B.
CN8970
479
479
479
452
452
453
Rear Jack Holder
453
453
453
453
453
CN3501
CN2752
CN2751
Slide
CN2753
CN2754
453
453
453
Rear Jack P.C.B.

Fig. D4-1

4. 1) Disconnect Connectors CN1, CN1101 and remove the 5 screws.
   2) Slide out the Power P.C.B. with the Shield together while releasing the 6 locking tabs.

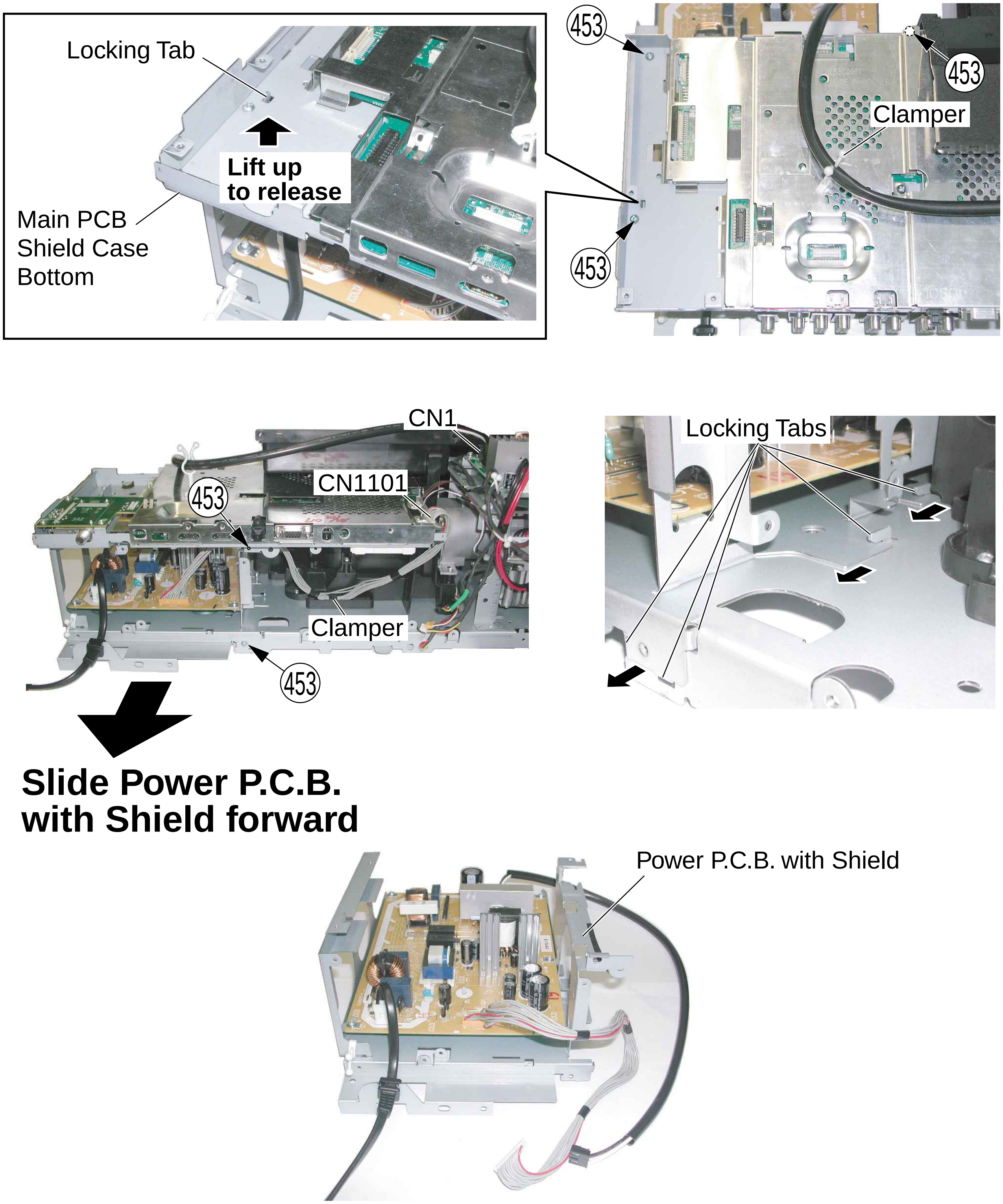
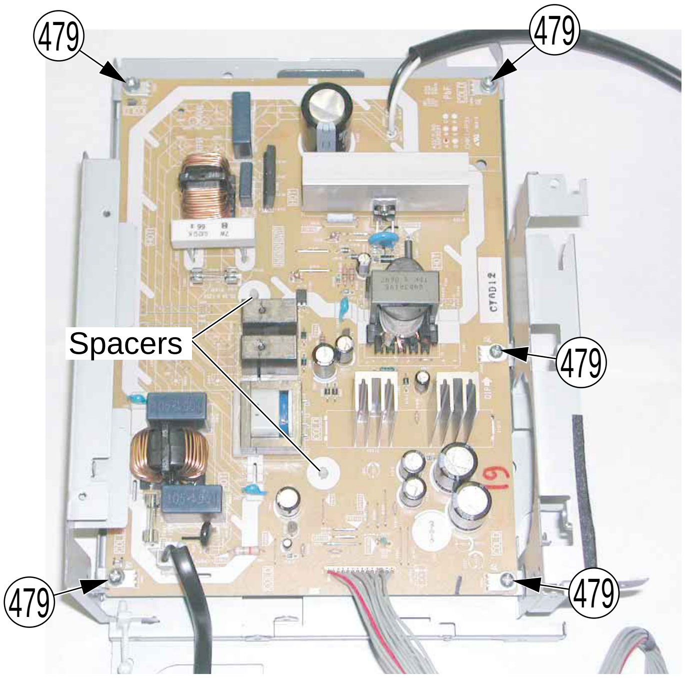

Locking Tab
Lift up to release
Main PCB Shield Case Bottom
453
453
Clamper
453
CN1
CN1101
453
Clamper
453
Slide Power P.C.B. with Shield forward
Locking Tabs
Power P.C.B. with Shield

Fig. D4-2

3) Remove the Power P.C.B. by removing the 5 screws and the 2 spacers, then disconnect the AC Cord.


479
479
Spacers
479
479
479

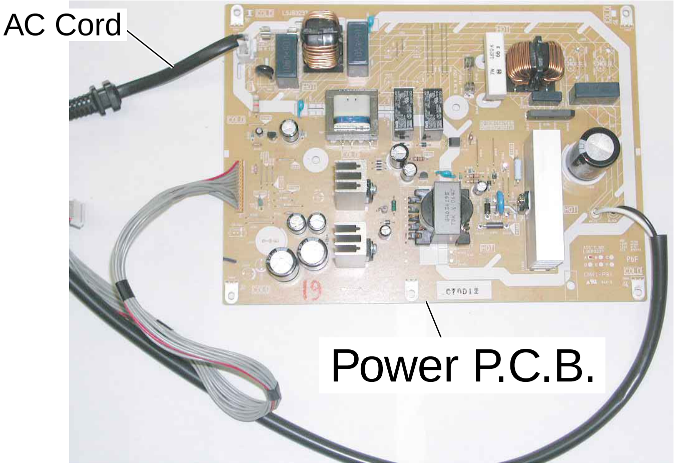

AC Cord
Power P.C.B.

Fig. D4-3

REMOVAL OF THE FRONT COVER UNIT AND THE DISPLAY

1. Remove the Rear Cover. Refer to Step a in "HOW TO REPLACE THE LAMP UNIT."
2. 1) Open the Front Door about 45 degrees and remove it by releasing the 2 Locking Tabs.
   2) Remove the 2 screws from the rear side, and the screw from the front side.
   3) Remove the Front Cover Unit by releasing the 4 Locking Tabs in that order.

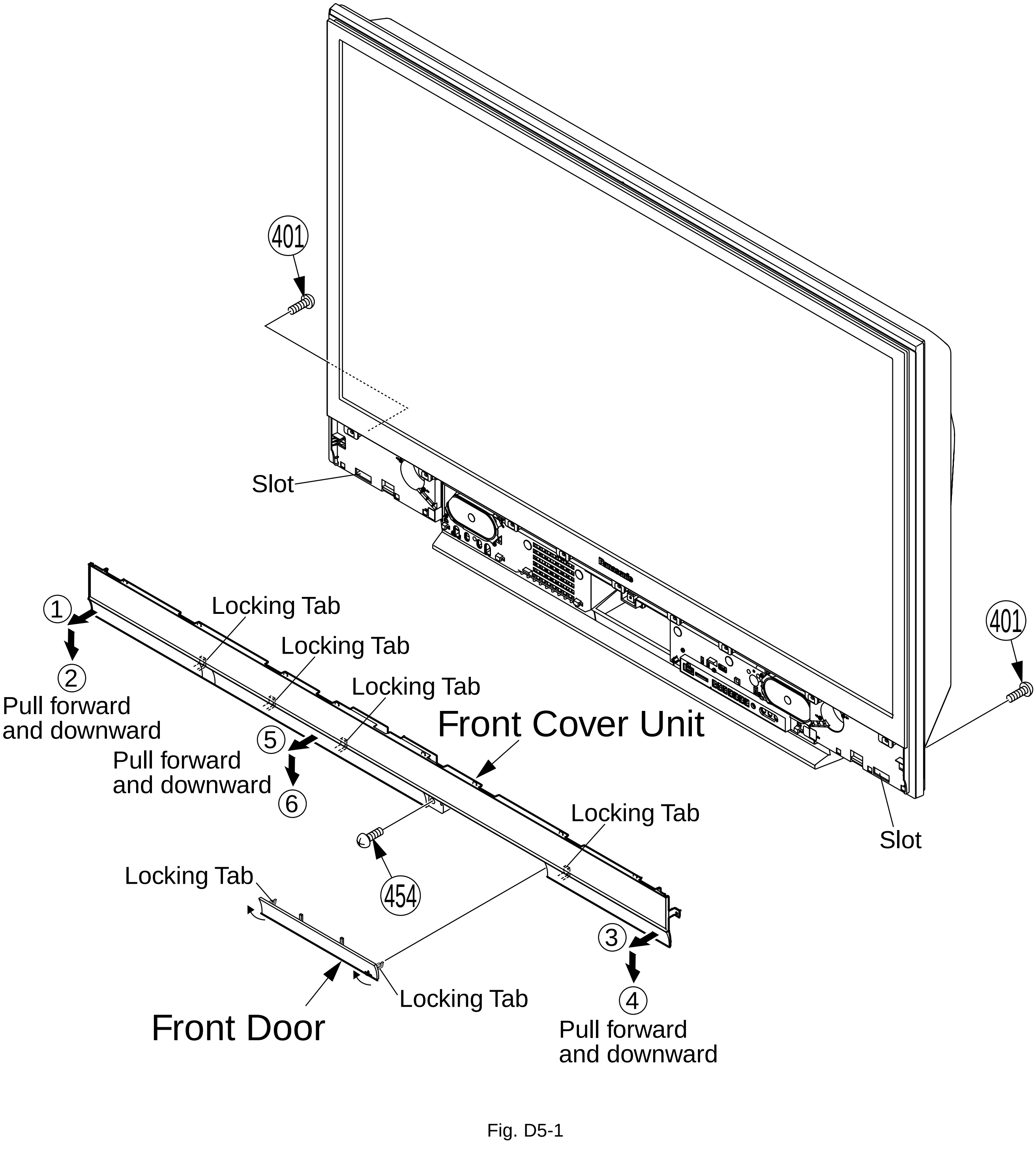
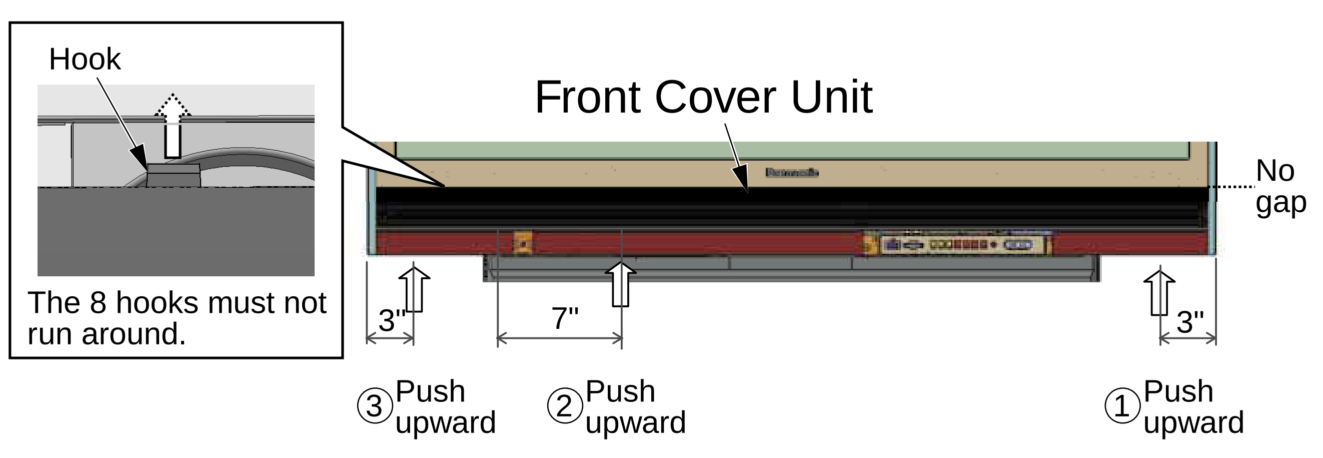

401
Slot
① Locking Tab
Locking Tab
②
Pull forward
and downward
Locking Tab
401
⑤
Front Cover Unit
Pull forward
and downward
⑥
Locking Tab
Slot
454
Locking Tab
③
Locking Tab
④
Front Door
Pull forward
and downward

Fig. D5-1

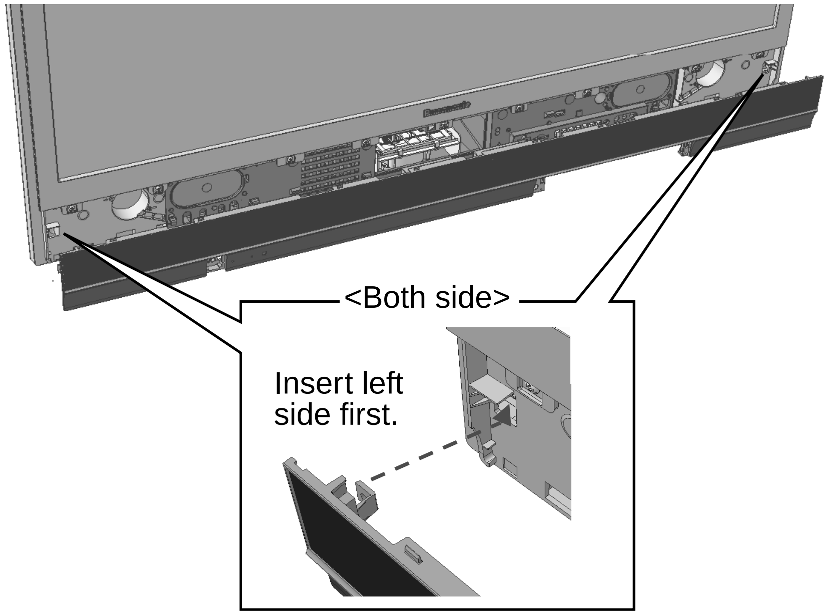
Reassembly Note for Front Cover Unit:

(For 50 inch models)

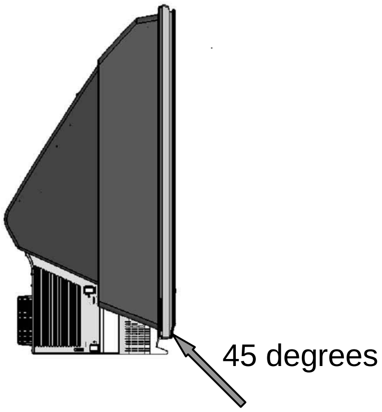

Hook
Front Cover Unit
No gap
3"
7"
3"
③ Push upward
② Push upward
① Push upward

The 8 hooks must not run around.

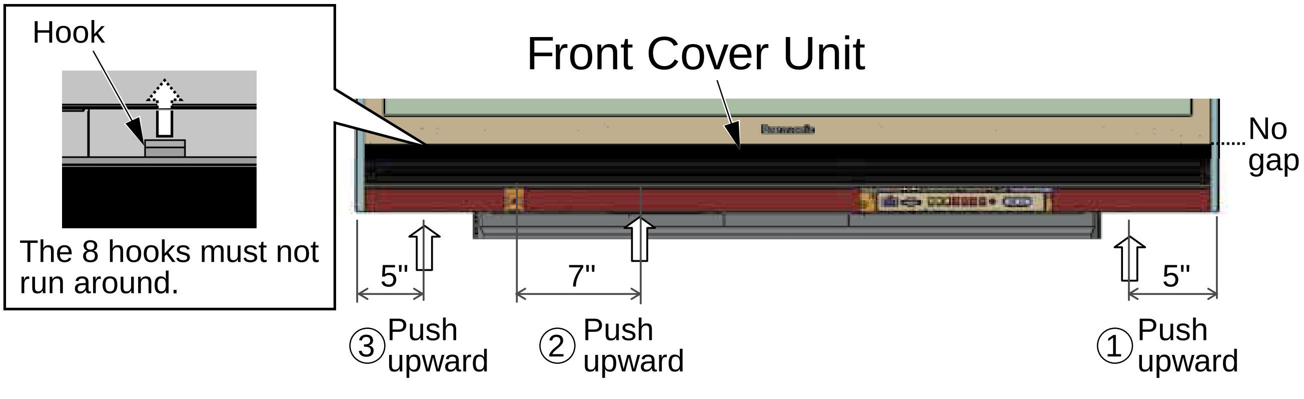
(For 56/61 inch models)



Insert left side first.

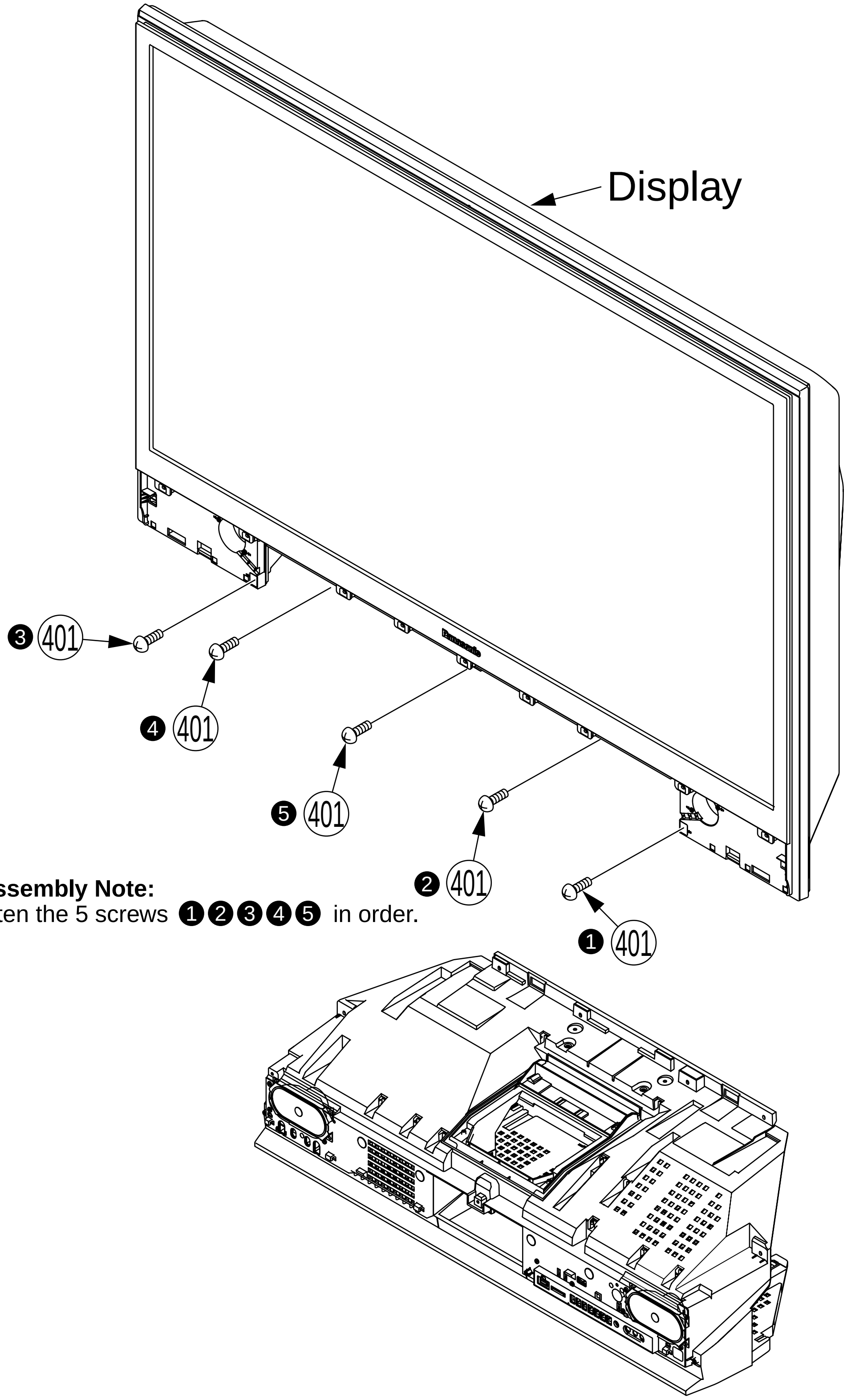


After installing, check that there is no gap and no bent. Then, push as indicated by the arrow.


Hook
Front Cover Unit
No gap
5"
7"
5"
③ Push upward
② Push upward
① Push upward

The 8 hooks must not run around.

3. 1) To remove Display, remove the 5 screws from front side.
   2) Lift up the Display.


Display
❸ 401
❹ 401
❺ 401
❷ 401
❶ 401

Reassembly Note:
Tighten the 5 screws ❶❷❸❹❺ in order.

Fig. D5-2

REMOVAL OF THE SCREEN UNIT FROM THE DISPLAY

1. Remove the Display. Refer to Steps 1 ~ 3 in "REMOVAL OF THE DISPLAY."
2. Remove the Screen Unit by removing the 14 screws.

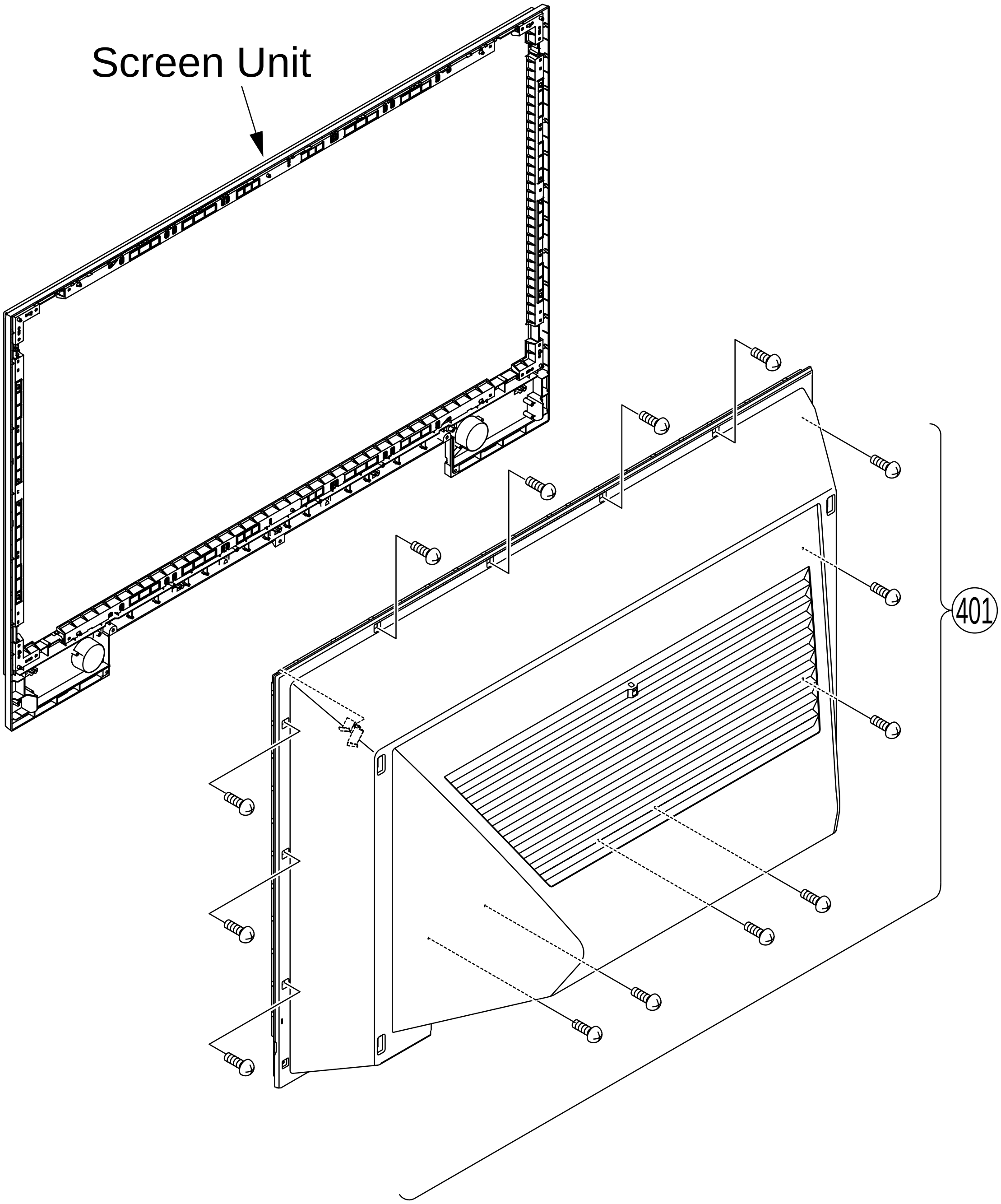


Fig. D6-1

3. 1) Remove the 4 Screen Support Corners, 2 Screen Support H Units and the 2 Screen Support V Units by removing the 22 screws.
   2) Remove the Fresnel Lens and the Lenticular Screen.

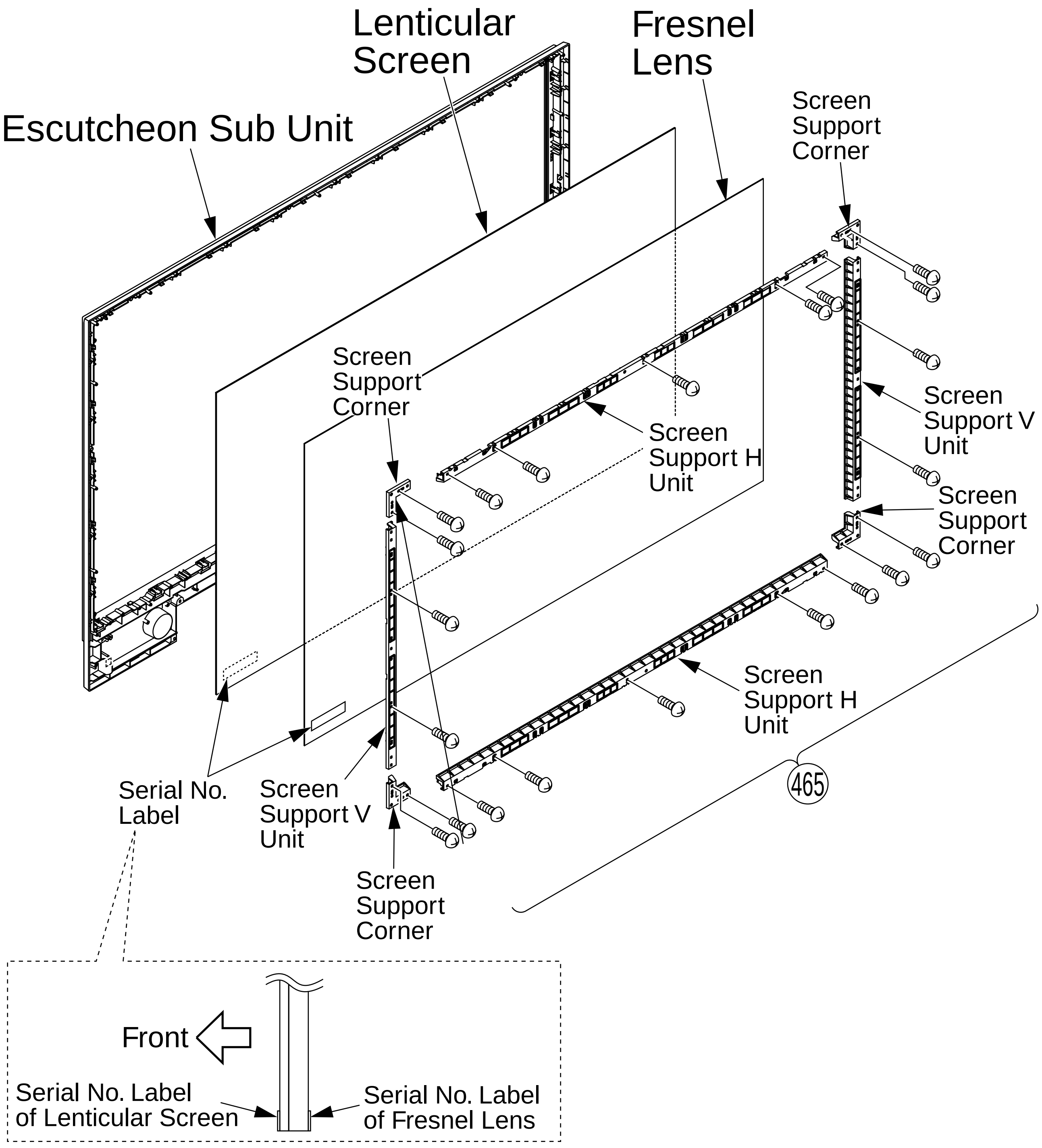

Lenticular Screen
Fresnel Lens
Escutcheon Sub Unit
Screen Support Corner
Screen Support Corner
Screen Support V Unit
Screen Support H Unit
Screen Support Corner
Screen Support H Unit
465
Serial No. Label
Screen Support V Unit
Screen Support Corner
Front
Serial No. Label of Lenticular Screen
Serial No. Label of Fresnel Lens

Fig. D6-2

Replacement Note for Screen Units:
When replacing the Fresnel Lens and the Lenticular Screen, it is imperative that dust, etc., does not adhere between the Fresnel Lens and the Lenticular Screen. Due to this risk, it is strongly recommended to replace the Screen Unit as a unit.

8 Measurements and Adjustments

8.1. Adjustment Procedures 1

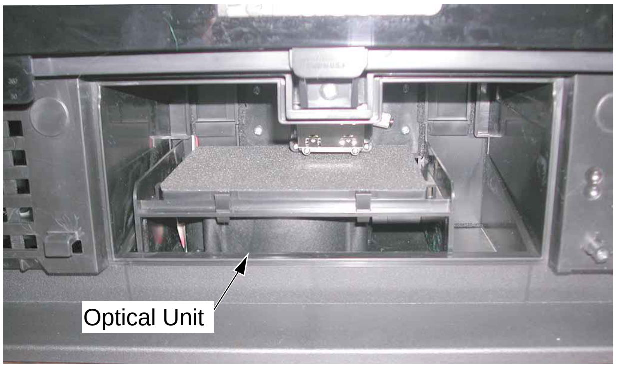
WHEN INSTALLING THE OPT/TV UNIT INTO THE UNIT AT THE USER’S LOCATION:

The following ADJUSTMENT of the OPT/TV Unit must be performed.

a. Focus Adjustment
   Note:
   The Focus Adjustment is not normally necessary when reinstalling.
   However, the Focus Adjustment should be performed when replacing the new OPT/TV Unit.
b. Mechanical Picture Position Adjustment (Tilt)
c. Electrical Picture Position Adjustment (H/V)

Adjustment Preparation:

1. Install all parts except the Front Cover Unit and the Front Door.

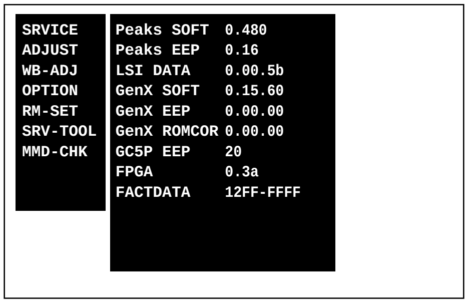


<Front View>

Fig. M1-1

Note:
When the rear cover is disassembled, the screen can be moved back and forth, which could affect the video display vertical position. This could also cause the vertical adjust to be at or near its limit.
Only try the picture position adjustment with the rear cover assembled!

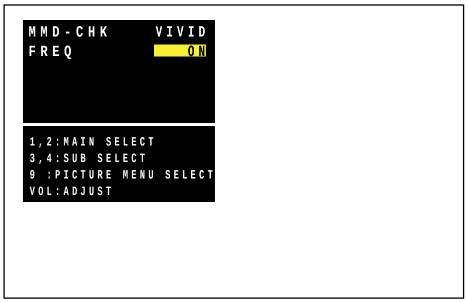
2. Turn the power on.
3. To enter Service Adjust Mode, hold the VOLUME DOWN button on the unit and press the RECALL key three times in power on condition.



```
SRVICE      Peaks SOFT  0.480
ADJUST      Peaks EEP   0.16
WB-ADJ      LSI DATA    0.00.5b
OPTION      GenX SOFT   0.15.60
RM-SET      GenX EEP    0.00.00
SRV-TOOL    GenX ROMCOR 0.00.00
MMD-CHK     GC5P EEP    20
            FPGA        0.3a
            FACTDATA    12FF-FFFF
```

<Main Menu>

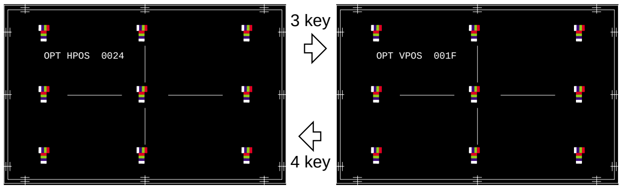
4. Press the 2 key to go to MMD-CHK 1/8 screen.



```
MMD-CHK     VIVID
FREQ           ON

1,2:MAIN SELECT
3,4:SUB SELECT
9 :PICTURE MENU SELECT
VOL:ADJUST
```

<MMD-CHK 1/8>

5. Press the 3 key to go to "Picture Position Screen."
6. Perform the adjustments.



```
OPT HPOS  0024
```

```
OPT VPOS  001F
```

<MMD-CHK 2/8> **<MMD-CHK 3/8>**

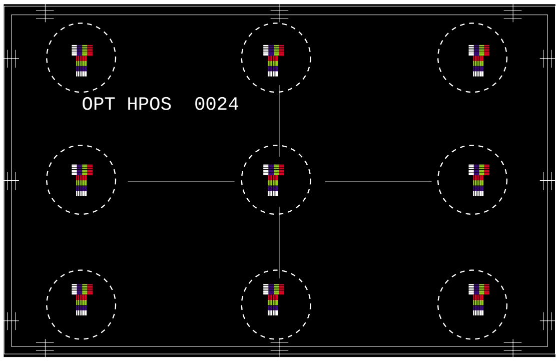
(Picture Position for Horizontal) **(Picture Position for Vertical)**

To release this mode:

1. After changing the value of OPT HPOS/OPT VPOS, the adjustment data will be written to the EEPROM.
2. Press 1 key to return to the Main Menu or turn off the power.
3. Install the Front Cover Unit with the screws and the Front Door.

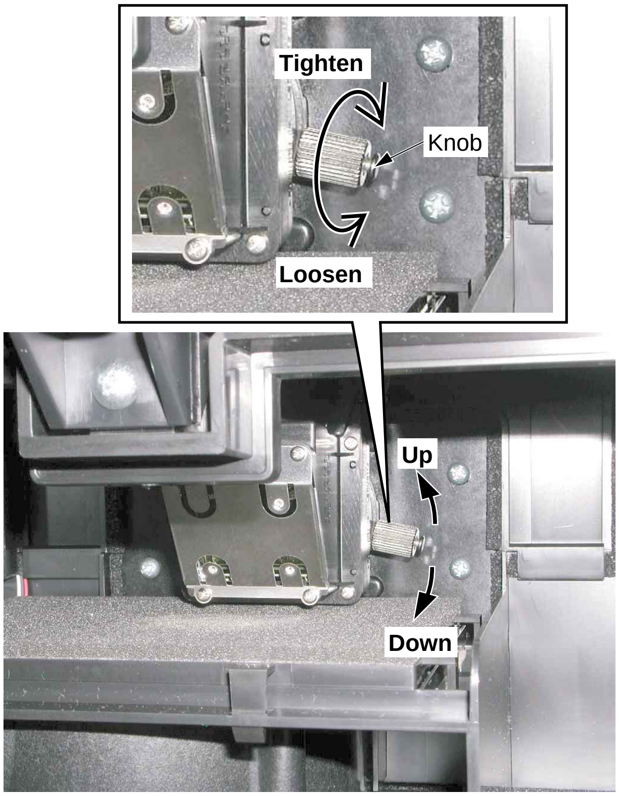
a. Focus Adjustment

1) Confirm that each of the pixels in the nine portions are clearly visible.


OPT HPOS 0024

<MMD-CHK 2/8>

2) If not, loosen the Knob on the Projection Lens until the Knob can be moved.

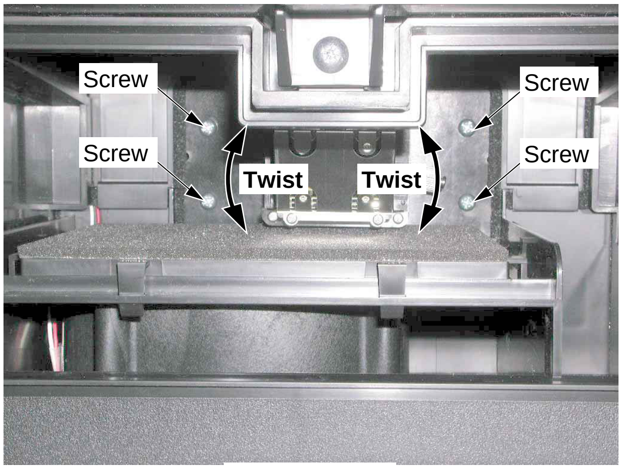

Tighten
Knob
Loosen
Up
Down

<Front View>
Fig. M1-6

3) Adjust the Knob by moving up or down so that each of the pixels in the nine portions is clearly visible to obtain the best focus.
4) Tighten the Knob.

b. Mechanical Picture Position Adjustment (Tilt)

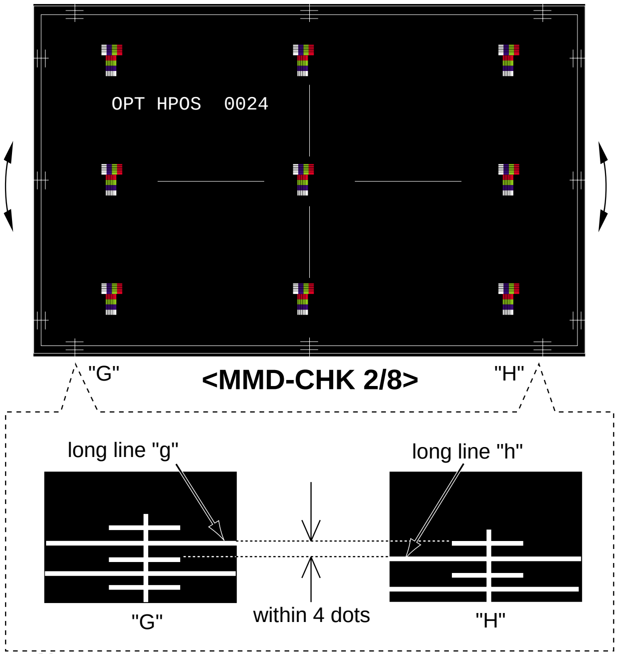
1) Loosen the 4 Screws on the Projection Unit.


Screw
Screw
Screw
Screw
Twist
Twist

<Front View>

Fig. M1-5

2) Adjust the Projection Lens by twisting so that the long line "g" and the long line "h" are within 4 dots. (The long line "g" and the long line "h" will be almost aligned horizontally.)


OPT HPOS 0024
"G"
"H"
long line "g"
long line "h"
within 4 dots
"G"
"H"

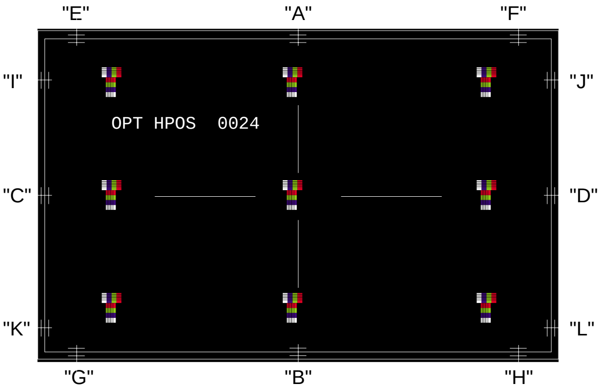
<MMD-CHK 2/8>

Note:
If the Projection Lens is twisted left, the Focus Screen twists left.
If the Projection Lens is twisted right, the Focus Screen twists right.

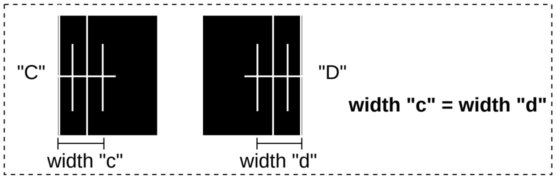
3) Tighten the 4 Screws while fixing the Projection Lens.

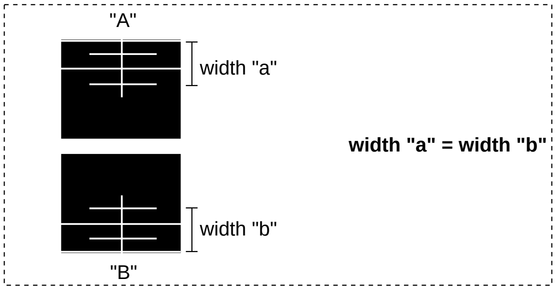
c. Electrical Picture Position Adjustment (H/V)

1) Adjust OPT HPOS so that "C" is symmetrical to "D." by pressing the VOLUME UP/DOWN key on the remote to change the value.
2) Press the CH UP/DOWN key on the remote to return to the OTHER menu.
3) Select OPT VPOS by pressing CH UP/DOWN key on the remote.
4) Adjust OPT VPOS so that "A" is symmetrical to "B" by pressing the VOLUME UP/DOWN key on the remote to change the value.


"E"
"A"
"F"
"I"
"J"
OPT HPOS 0024
"C"
"D"
"K"
"L"
"G"
"B"
"H"

<MMD-CHK 2/8>


"C"
"D"
width "c" = width "d"
width "c"
width "d"


"A"
width "a"
width "a" = width "b"
width "b"
"B"

5) Confirm that all "A", "B", "C", "D", "E", "F", "G", "H", "I", "J", "K", "L" are each almost symmetrical.
6) If not, adjust the "OPT HPOS" and "OPT VPOS" (repeat steps 1-6) until the picture is in the correct position.
7) After changing the value, the adjustment data will be written to the EEPROM.

9 Maintenance

9.1. Cleaning Methods

THE SCREEN UNIT AND THE MIRROR

- THE SCREEN UNIT (Lenticular Screen, Fresnel Lens)

It is strongly recommended that the Lenticular Screen surface (outside) and the Fresnel Lens surface (inside) should be wiped gently with a clean, soft, dry cloth to remove the dirt.

Note:

1. If the dirt cannot be removed by wiping with a clean, soft, dry cloth, use a clean, soft, dry cloth moistened with diluted neutral pH liquid cleanser or a lens cleaner (usually containing a small amount of ethyl alcohol) and wipe lightly. Take care not to leave any streaks.
   Do not use cleaning materials containing methyl alcohol, acetone, or dichloromethane.
2. Use an air blower to clean the inner surface of the Lenticular Screen and the outer surface of the Fresnel Lens (the surfaces that one another). These surfaces must not be wiped with a cloth.

- THE MIRROR

Remove any dirt with an air blower or wipe with a clean, soft, dry cloth. If wiped too forcefully, the surface of the Mirror can be damaged. If wiping with a clean, dry cloth does not remove the dirt, the Mirror must be replaced.

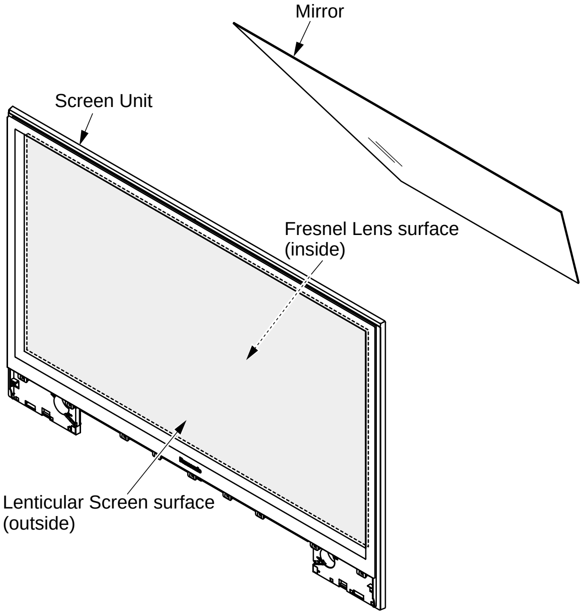
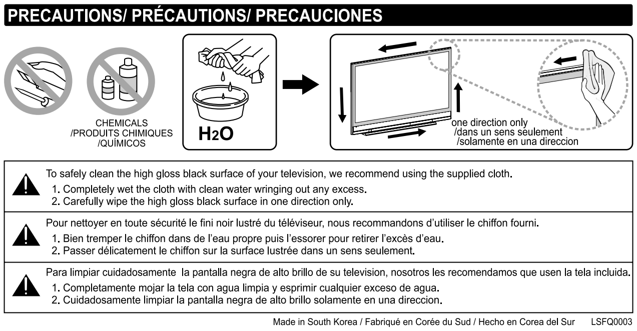


Fig. 6-1

- THE BEZEL


PRECAUTIONS/ PRÉCAUTIONS/ PRECAUCIONES
CHEMICALS
/PRODUITS CHIMIQUES
/QUÍMICOS
H2O
one direction only
/dans un sens seulement
/solamente en una direccion

To safely clean the high gloss black surface of your television, we recommend using the supplied cloth.

1. Completely wet the cloth with clean water wringing out any excess.
2. Carefully wipe the high gloss black surface in one direction only.

Pour nettoyer en toute sécurité le fini noir lustré du téléviseur, nous recommandons d'utiliser le chiffon fourni.

1. Bien tremper le chiffon dans de l'eau propre puis l'essorer pour retirer l'excès d'eau.
2. Passer délicatement le chiffon sur la surface lustrée dans un sens seulement.

Para limpiar cuidadosamente la pantalla negra de alto brillo de su television, nosotros les recomendamos que usen la tela incluida.

1. Completamente mojar la tela con agua limpia y esprimir cualquier exceso de agua.
2. Cuidadosamente limpiar la pantalla negra de alto brillo solamente en una direccion.

Made in South Korea / Fabriqué en Corée du Sud / Hecho en Corea del Sur LSFQ0003

THE PROJECTION LENS

Use lens cleaning paper and cleaner available at your local camera shop, etc. Dampen the cleaning paper with cleaner and gently wipe the surface of the lens from the center outward to remove dust.

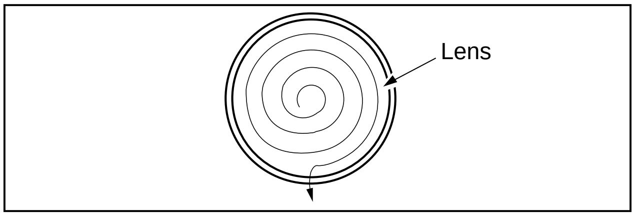


Fig. 6-2

THE FILTER ON THE OPT/TV UNIT

CAUTION:

Operating with torn or damaged Air Filter may cause damage to the OPT/TV Unit.
Remove the OPT/TV Unit from rear. Then, clean the air filters. Gently remove any accumulated dust from filter with a vacuum cleaner; use extreme care so as not to damage or tear the filters.

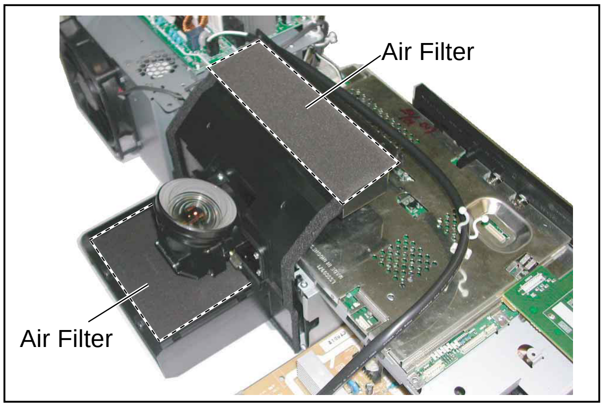


Fig. 6-3

10 Voltage Chart and Waveform of Connectors

MAIN P.C.B.

MODE PIN NO.	POWER ON	WF NO.
CN1101		
1	20.9	---
2	20.9	---
3	0	---
4	0	---
5	7.1	---
6	3.3	---
7	31.5	---
8	3.1	---
9	9.1	---
10	9.1	---
11	9.1	---
12	0	---
13	0	---
14	0	---
CN1102		
1	3.1	---
2	3.1	---
CN3001		
1	0	WF1
2	5.1	---
3	0	WF2
4	0	WF3
5	0	---
6	0	WF1
7	0	---
8	0	WF1
9	0	---
10	0	WF4
11	0	WF5
12	0	WF6
13	0	---
14	0	WF4
15	0	WF5
16	0	WF6
17	0	---
18	4.2	WF7
19	4.6	---
20	4.6	---
21	2.2	---
22	2.2	---
23	4.5	---
24	4.5	---
25	0	---
26	0	---
27	0	---
28	1.3	---
29	2.9	---
30	3.4	---
31	1.3	---
32	5.0	---
33	5.0	---
34	9.0	---
35	0	---
CN4501		
1	3.4	---
2	0	---
3	10.5	---
4	10.5	---
5	10.5	---
6	10.5	---
CN5503		
1	3.4	---
2	0	---
3	3.4	---
4	3.4	---
5	0	---
6	3.4	---
7	3.4	---
8	0	---
9	3.4	---
10	3.4	---
11	0	---
12	3.4	---
13	0	---
14	0	---
15	3.3	---
16	3.3	---
17	5.2	---
18	0	---
19	0	---
20	3.4	---
21	0	---
22	3.4	---
23	---	---
24	0	---
25	3.3	---
26	0	---
27	3.3	---
28	3.3	---
29	---	---
30	---	---
CN6003		
1	4.7	---
2	3.4	---
3	0	---
4	3.4	---
5	---	---
6	0	---
7	0	---
8	0	---
CN6005		
1	0	WF8
2	5.1	---
3	5.2	---
4	---	---
5	---	---
6	0	---
7	0.1	WF9
CN8201		
1	3.3	---
2	0	---
3	0	---
4	0	---
5	3.3	---
6	0	---
7	3.3	---
8	3.3	---
9	3.3	---
10	3.3	---
11	3.3	---
12	3.3	---
CN8801		
1	2.3	---
2	4.2	---
3	0	---
4	31.6	---
5	2.3	---
6	5.1	---
7	0	---
8	5.1	---
9	0	---
10	1.8	---
11	0	---
12	2.9	---
13	0	---
14	0	---
15	0	---
16	0	---
17	5.1	---
18	0	---
19	5.1	---
20	3.3	---

POWER P.C.B.

MODE PIN NO.	POWER ON	WF NO.
CN1003		
1	20.9	---
2	20.9	---
3	0	---
4	0	---
5	7.1	---
6	3.3	---
7	31.5	---
8	3.1	---
9	9.1	---
10	9.1	---
11	9.1	---
12	0	---
13	0	---
14	0	---

SD/HDMI P.C.B.

MODE PIN NO.	POWER ON	WF NO.
CN9802		
1	3.3	---
2	0	---
3	0	---
4	0	---
5	3.3	---
6	0	---
7	3.3	---
8	3.3	---
9	3.3	---
10	3.3	---
11	3.3	---
12	3.3	---
CN9804		
1	3.4	---
2	0	---
3	3.4	---
4	3.4	---
5	0	---
6	3.4	---
7	3.4	---
8	0	---
9	3.4	---
10	3.4	---
11	0	---
12	3.4	---
13	0	---
14	0	---
15	3.3	---
16	3.3	---
17	5.2	---
18	0	---
19	0	---
20	3.4	---
21	0	---
22	3.4	---
23	---	---
24	0	---
25	3.3	---
26	0	---
27	3.3	---
28	3.3	---
29	---	---
30	---	---

REAR JACK P.C.B.

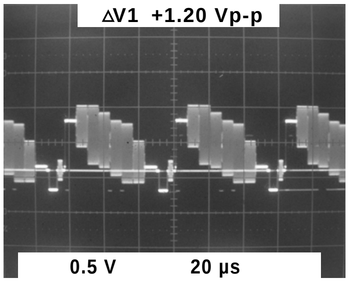
MODE PIN NO.	POWER ON	WF NO.
CN2751		
1	7.0	---
2	0	---
3	0	---
CN2752		
1	7.0	---
2	0	---
3	0	---
CN2753		
1	7.1	---
2	0	---
3	0.1	---
CN2754		
1	6.1	---
2	0	---
3	0.1	---
1	0	WF1
2	5.1	---
3	0	WF2
4	0	WF3
5	0	---
6	0	WF1
7	0	---
8	0	WF1
9	0	---
10	0	WF4
11	0	WF5
12	0	WF6
13	0	---
14	0	WF4
15	0	WF5
16	0	WF6
17	0	---
18	4.2	WF7
19	4.6	---
20	4.6	---
21	2.2	---
22	2.2	---
23	4.5	---
24	4.5	---
25	0	---
26	0	---
27	0	---
28	1.3	---
29	2.9	---
30	3.4	---
31	1.3	---
32	5.0	---
33	5.0	---
34	9.0	---
35	0	---

TUNER P.C.B.

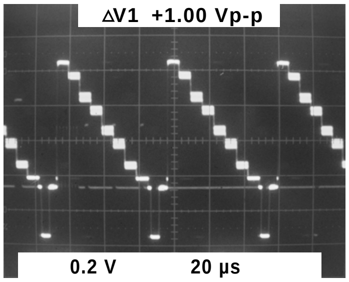
MODE PIN NO.	POWER ON	WF NO.
CN8801		
1	2.3	---
2	4.2	---
3	0	---
4	31.6	---
5	2.3	---
6	5.1	---
7	0	---
8	5.1	---
9	0	---
10	1.8	---
11	0	---
12	2.9	---
13	0	---
14	0	---
15	0	---
16	0	---
17	5.1	---
18	0	---
19	5.1	---
20	3.3	---

RF AMP POWER SUPPLY P.C.B.

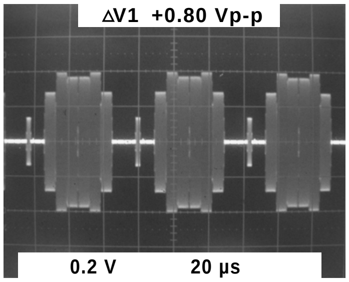
MODE PIN NO.	POWER ON	WF NO.
CN1		
1-2	AC120	---
CN151		
1	26.0	---
2	26.0	---
3	26.0	---
4	0	---
5	0	---
6	0	---



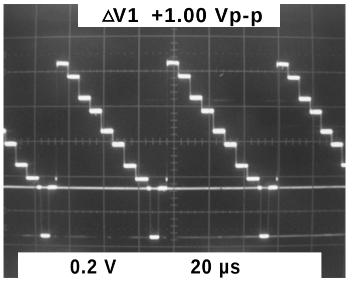
WF1



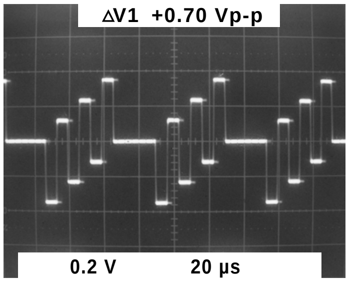
WF2



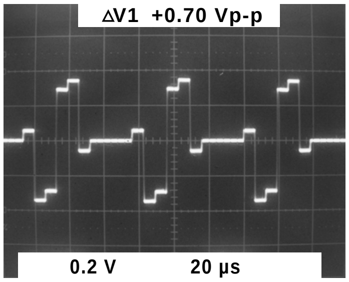
WF3



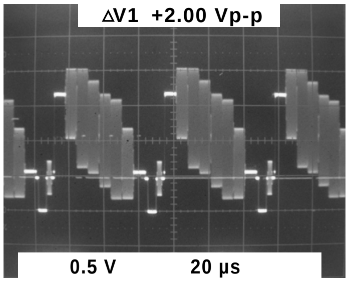
WF4



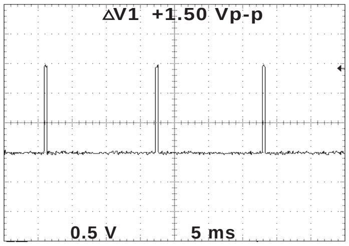
WF5



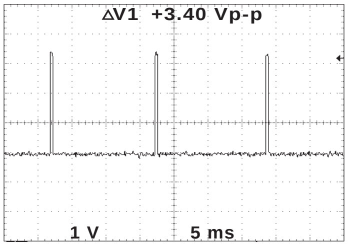
WF6



WF7



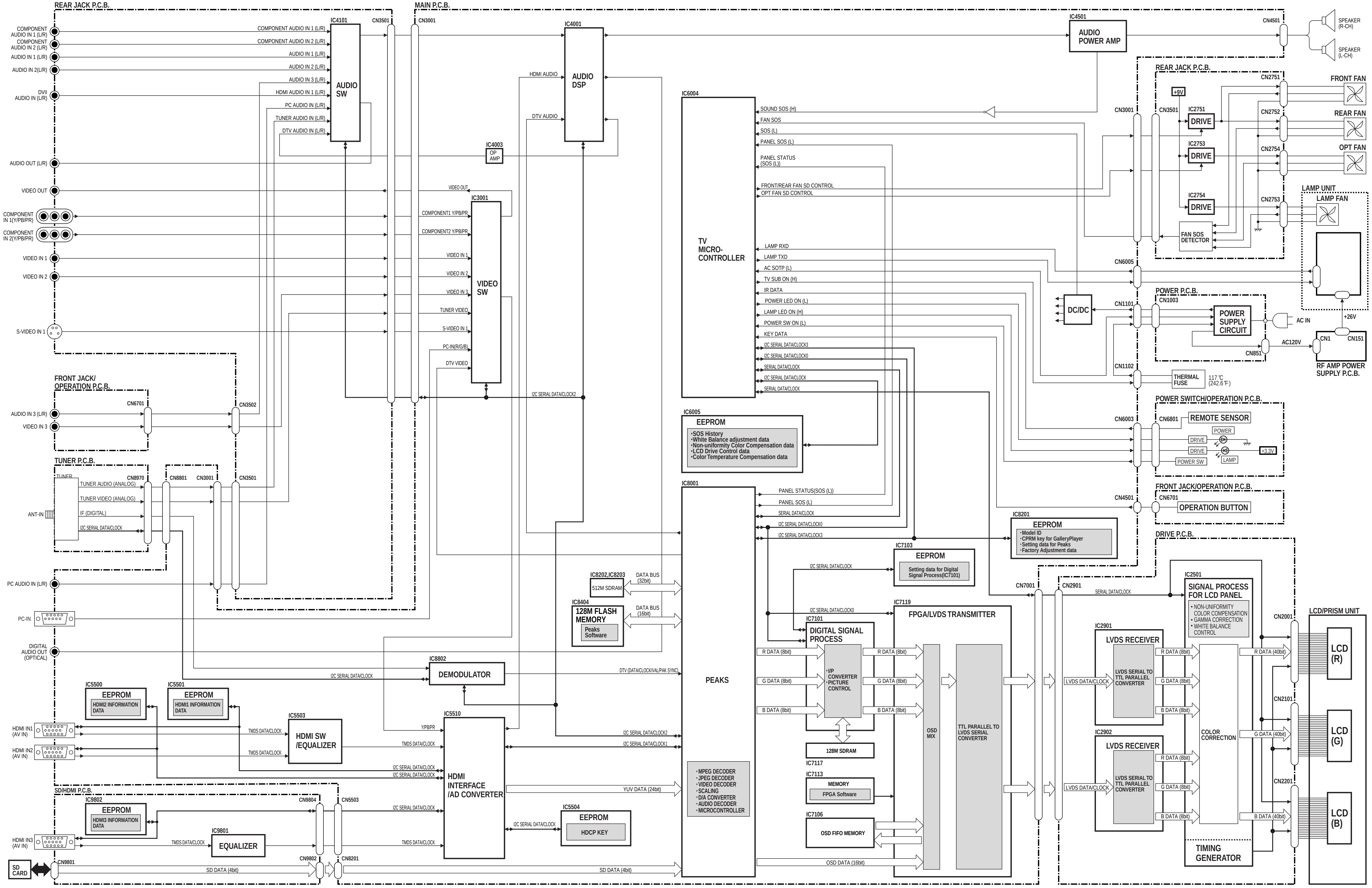
WF8



WF9

11 Block Diagrams

OVERALL BLOCK DIAGRAM


REAR JACK P.C.B.
MAIN P.C.B.
COMPONENT AUDIO IN 1 (L/R)
COMPONENT AUDIO IN 2 (L/R)
AUDIO IN 1 (L/R)
AUDIO IN 2(L/R)
DVII AUDIO IN (L/R)
AUDIO OUT (L/R)
VIDEO OUT
COMPONENT IN 1(Y/PB/PR)
COMPONENT IN 2(Y/PB/PR)
VIDEO IN 1
VIDEO IN 2
S-VIDEO IN 1
IC4101
AUDIO SW
CN3501
CN3001
AUDIO IN 3 (L/R)
HDMI AUDIO IN 1 (L/R)
PC AUDIO IN (L/R)
TUNER AUDIO IN (L/R)
DTV AUDIO IN (L/R)
IC4001
AUDIO DSP
HDMI AUDIO
DTV AUDIO
IC4003
OP AMP
IC4501
AUDIO POWER AMP
CN4501
SPEAKER (R-CH)
SPEAKER (L-CH)
VIDEO OUT
IC3001
VIDEO SW
COMPONENT1 Y/PB/PR
COMPONENT2 Y/PB/PR
VIDEO IN 1
VIDEO IN 2
VIDEO IN 3
TUNER VIDEO
S-VIDEO IN 1
PC-IN(R/G/B)
DTV VIDEO
I2C SERIAL DATA/CLOCK2
FRONT JACK/ OPERATION P.C.B.
CN6701
CN3502
AUDIO IN 3 (L/R)
VIDEO IN 3
TUNER P.C.B.
TUNER
CN8970
CN8801
CN3001
CN3501
TUNER AUDIO (ANALOG)
TUNER VIDEO (ANALOG)
IF (DIGITAL)
I2C SERIAL DATA/CLOCK
ANT-IN
PC AUDIO IN (L/R)
PC-IN
DIGITAL AUDIO OUT (OPTICAL)
IC6004
TV MICRO-CONTROLLER
SOUND SOS (H)
FAN SOS
SOS (L)
PANEL SOS (L)
PANEL STATUS (SOS (L))
FRONT/REAR FAN SD CONTROL
OPT FAN SD CONTROL
LAMP RXD
LAMP TXD
AC SOTP (L)
TV SUB ON (H)
IR DATA
POWER LED ON (L)
LAMP LED ON (H)
POWER SW ON (L)
KEY DATA
I2C SERIAL DATA/CLOCK3
I2C SERIAL DATA/CLOCK0
SERIAL DATA/CLOCK
I2C SERIAL DATA/CLOCK
SERIAL DATA/CLOCK
IC6005
EEPROM
·SOS History
·White Balance adjustment data
·Non-uniformity Color Compensation data
·LCD Drive Control data
·Color Temperature Compensation data
REAR JACK P.C.B.
CN3001
CN3501
+9V
IC2751
DRIVE
IC2753
DRIVE
IC2754
DRIVE
CN2751
CN2752
CN2754
CN2753
FRONT FAN
REAR FAN
OPT FAN
FAN SOS DETECTOR
LAMP UNIT
LAMP FAN
CN6005
DC/DC
POWER P.C.B.
CN1101
CN1003
POWER SUPPLY CIRCUIT
AC IN
+26V
CN851
AC120V
CN1
CN151
RF AMP POWER SUPPLY P.C.B.
CN1102
THERMAL FUSE
117℃ (242.6℉)
POWER SWITCH/OPERATION P.C.B.
CN6003
CN6801
REMOTE SENSOR
POWER
DRIVE
DRIVE
POWER SW
LAMP
+3.3V
FRONT JACK/OPERATION P.C.B.
CN4501
CN6701
OPERATION BUTTON
IC8001
PANEL STATUS(SOS (L))
PANEL SOS (L)
SERIAL DATA/CLOCK
I2C SERIAL DATA/CLOCK0
I2C SERIAL DATA/CLOCK3
IC8201
EEPROM
·Model ID
·CPRM key for GalleryPlayer
·Setting data for Peaks
·Factory Adjustment data
DRIVE P.C.B.
IC7103
EEPROM
Setting data for Digital Signal Process(IC7101)
I2C SERIAL DATA/CLOCK
IC8202,IC8203
512M SDRAM
DATA BUS (32bit)
IC8404
128M FLASH MEMORY
Peaks Software
DATA BUS (16bit)
IC8802
DEMODULATOR
I2C SERIAL DATA/CLOCK
DTV (DATA/CLOCK/VAL/PAK SYNC)
PEAKS
·MPEG DECODER
·JPEG DECODER
·VIDEO DECODER
·SCALING
·D/A CONVERTER
·AUDIO DECODER
·MICROCONTROLLER
IC7119
FPGA/LVDS TRANSMITTER
IC7101
DIGITAL SIGNAL PROCESS
I2C SERIAL DATA/CLOCK0
R DATA (8bit)
G DATA (8bit)
B DATA (8bit)
·I/P CONVERTER
·PICTURE CONTROL
128M SDRAM
IC7117
IC7113
MEMORY
FPGA Software
IC7106
OSD FIFO MEMORY
OSD MIX
TTL PARALLEL TO LVDS SERIAL CONVERTER
OSD DATA (16bit)
CN7001
CN2901
SERIAL DATA/CLOCK
IC2501
SIGNAL PROCESS FOR LCD PANEL
• NON-UNIFORMITY COLOR COMPENSATION
• GAMMA CORRECTION
• WHITE BALANCE CONTROL
IC2901
LVDS RECEIVER
LVDS SERIAL TO TTL PARALLEL CONVERTER
LVDS DATA/CLOCK
IC2902
LVDS RECEIVER
COLOR CORRECTION
TIMING GENERATOR
R DATA (40bit)
G DATA (40bit)
B DATA (40bit)
CN2001
CN2101
CN2201
LCD/PRISM UNIT
LCD (R)
LCD (G)
LCD (B)
IC5500
EEPROM
HDMI2 INFORMATION DATA
IC5501
EEPROM
HDMI1 INFORMATION DATA
IC5503
HDMI SW /EQUALIZER
TMDS DATA/CLOCK
HDMI IN1 (AV IN)
HDMI IN2 (AV IN)
IC5510
HDMI INTERFACE /AD CONVERTER
Y/PB/PR
I2C SERIAL DATA/CLOCK2
I2C SERIAL DATA/CLOCK1
YUV DATA (24bit)
IC5504
EEPROM
HDCP KEY
SD/HDMI P.C.B.
IC9802
EEPROM
HDMI3 INFORMATION DATA
CN9804
CN5503
IC9801
EQUALIZER
HDMI IN3 (AV IN)
SD CARD
CN9801
CN9802
CN8201
SD DATA (4bit)

OVERALL BLOCK DIAGRAM
PT-50LCZ70/PT-56LCZ70/PT-61LCZ70/PT-50LCZ7/PT-56LCZ7
/PT-61LCZ7/PT-50LCZ70-K/PT-56LCZ70-K/PT61LCZ70-K

12 Schematic Diagrams

12.1. SCHEMATIC DIAGRAM & CIRCUIT BOARD LAYOUT NOTES

1. **Important safety notice**
   Components identified by the sign ⚠ have special characteristics important for safety. When replacing any of these components. Use only the specified parts.

2. Do not use the part number shown on this drawing for ordering.
   The correct part number and part value is shown in the parts list, and may be slightly different or amended since this drawing was prepared.

3. Use only original replacement parts:
   To maintain original function and reliability of repaired units, use only original replacement parts which are listed with their part numbers in the parts list section of the service manual.

4. Parts different in shape or size may be used.
   However, only interchangeable parts will be supplied as service replacement parts.

5. Test point information
   ● : Test point with a jumper wire across a hole in P.C.B.
   ○ : Test point with no test pin.

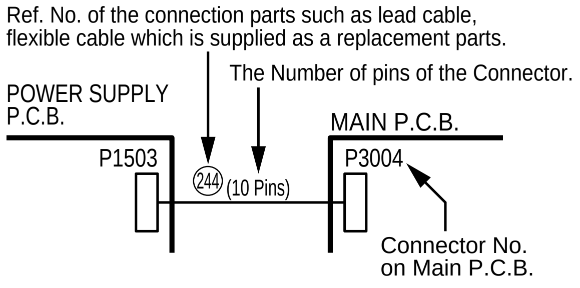
Schematic Diagram Notes

1. Indication for Zener Voltage of Zener Diodes
   The Zener Voltage of Zener Diodes are indicated as such on Schematic Diagrams.

   Example:
   (6.2V)......Zener Voltage

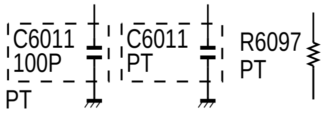
2. How to identify Connectors
   Each connector is labeled with a Connector No. and Pin No. Indicating what it is connected to,
   in other words, its counter part.
   Use the interconnection schematic diagram to find the connection between associated connectors.

   Example:
   The connections between P.C.B.s are shown below.


Ref. No. of the connection parts such as lead cable, flexible cable which is supplied as a replacement parts.
The Number of pins of the Connector.
POWER SUPPLY P.C.B.
MAIN P.C.B.
P1503
244
(10 Pins)
P3004
Connector No. on Main P.C.B.

3. Parts marked "PT" are not used in any models included in this service model.

Example:


C6011
100P
PT
C6011
PT
R6097
PT

4. Jumper wires are used for WA10, WA5 etc and these are not supplied as replacement parts.

Circuit Board Layout Note

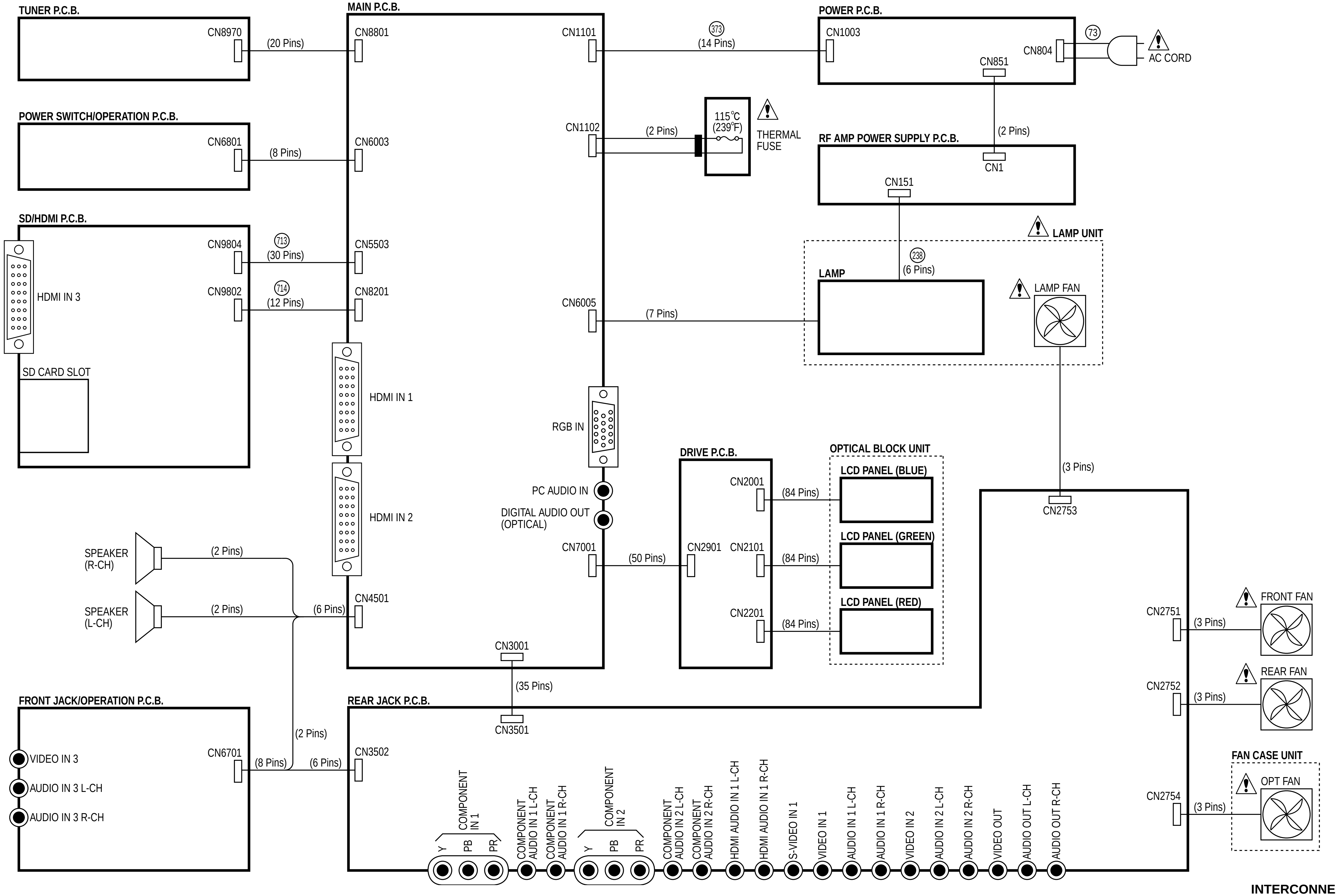
Circuit Board Layout shows components installed for various models.
For proper parts content for the model you are servicing, please refer to the schematic diagram and parts list.

NOTE:
Circuit Board Layout includes components which are not used.

12.2. INTERCONNECTION SCHEMATIC DIAGRAM

INTERCONNECTION SCHEMATIC DIAGRAM

IMPORTANT SAFETY NOTICE:
COMPONENTS IDENTIFIED BY THE SIGN ⚠ HAVE
SPECIAL CHARACTERISTICS IMPORTANT FOR SAFETY.
WHEN REPLACING ANY OF THESE COMPONENTS,
USE ONLY THE SPECIFIED PARTS.


TUNER P.C.B.
CN8970
(20 Pins)
MAIN P.C.B.
CN8801
CN1101
373
(14 Pins)
POWER P.C.B.
CN1003
73
CN804
CN851
AC CORD
POWER SWITCH/OPERATION P.C.B.
CN6801
(8 Pins)
CN6003
CN1102
(2 Pins)
115℃
(239°F)
THERMAL
FUSE
RF AMP POWER SUPPLY P.C.B.
(2 Pins)
CN1
CN151
SD/HDMI P.C.B.
CN9804
713
(30 Pins)
CN5503
CN9802
714
(12 Pins)
CN8201
HDMI IN 3
LAMP UNIT
238
(6 Pins)
LAMP
LAMP FAN
CN6005
(7 Pins)
SD CARD SLOT
HDMI IN 1
RGB IN
DRIVE P.C.B.
OPTICAL BLOCK UNIT
(3 Pins)
CN2001
(84 Pins)
LCD PANEL (BLUE)
PC AUDIO IN
DIGITAL AUDIO OUT
(OPTICAL)
HDMI IN 2
CN2753
CN7001
(50 Pins)
CN2901
CN2101
(84 Pins)
LCD PANEL (GREEN)
SPEAKER
(R-CH)
(2 Pins)
SPEAKER
(L-CH)
(2 Pins)
(6 Pins)
CN4501
CN2201
(84 Pins)
LCD PANEL (RED)
FRONT FAN
CN2751
(3 Pins)
CN3001
(35 Pins)
REAR FAN
CN2752
(3 Pins)
FRONT JACK/OPERATION P.C.B.
REAR JACK P.C.B.
CN3501
(2 Pins)
FAN CASE UNIT
VIDEO IN 3
AUDIO IN 3 L-CH
AUDIO IN 3 R-CH
CN6701
(8 Pins)
(6 Pins)
CN3502
OPT FAN
CN2754
(3 Pins)
COMPONENT
IN 1
Y
PB
PR
COMPONENT
AUDIO IN 1 L-CH
COMPONENT
AUDIO IN 1 R-CH
COMPONENT
IN 2
Y
PB
PR
COMPONENT
AUDIO IN 2 L-CH
COMPONENT
AUDIO IN 2 R-CH
HDMI AUDIO IN 1 L-CH
HDMI AUDIO IN 1 R-CH
S-VIDEO IN 1
VIDEO IN 1
AUDIO IN 1 L-CH
AUDIO IN 1 R-CH
VIDEO IN 2
AUDIO IN 2 L-CH
AUDIO IN 2 R-CH
VIDEO OUT
AUDIO OUT L-CH
AUDIO OUT R-CH

INTERCONNECTION SCHEMATIC DIAGRAM
PT-50LCZ70/PT-56LCZ70/PT-61LCZ70/PT-50LCZ7/PT-56LCZ7
/PT-61LCZ7/PT-50LCZ70-K/PT-56LCZ70-K/PT61LCZ70-K

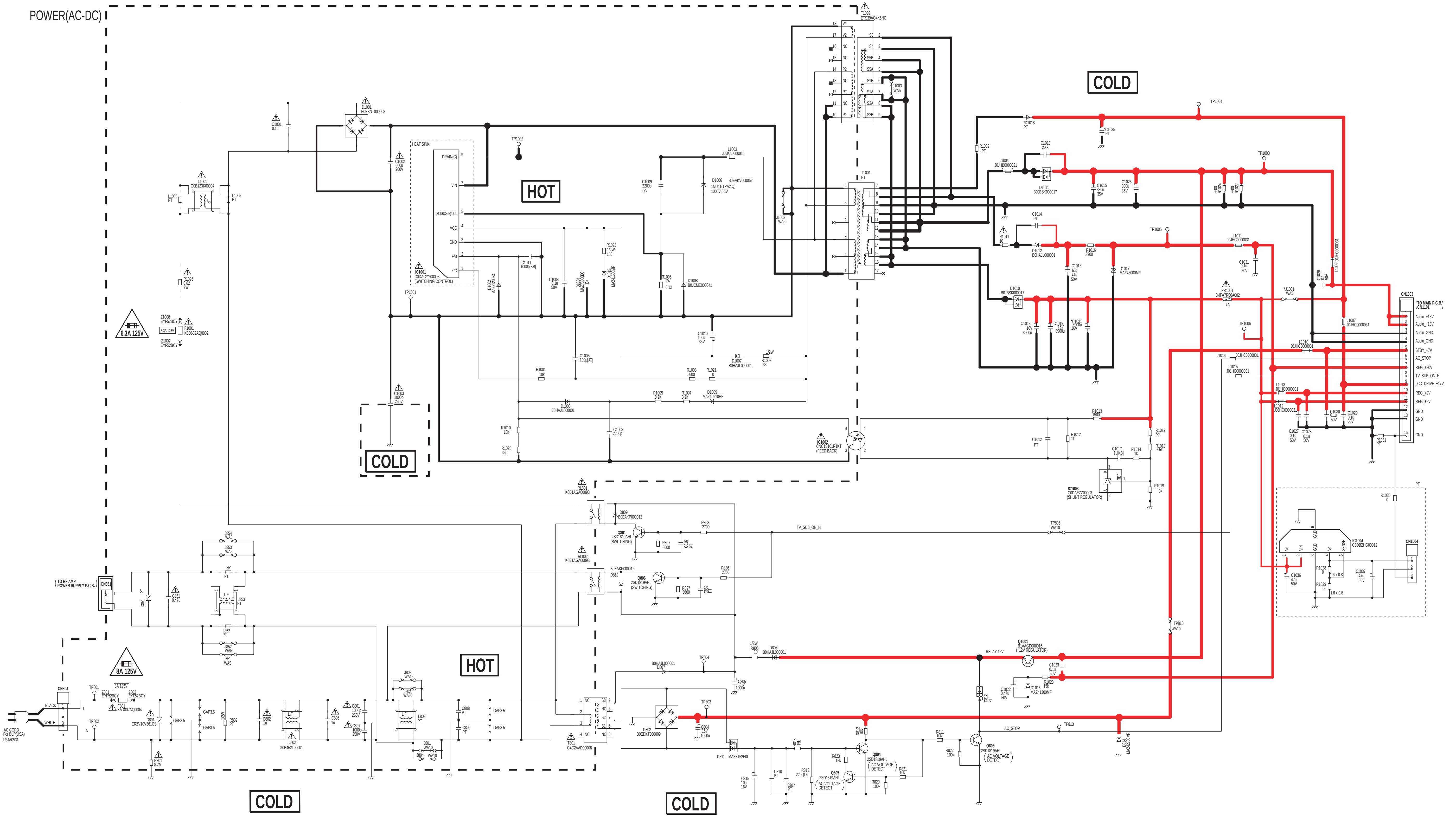
12.3. POWER SCHEMATIC DIAGRAMS

POWER SCHEMATIC DIAGRAM

⚠ 8A 125V
CAUTION: FOR CONTINUED PROTECTION AGAINST FIRE HAZARD,
REPLACE ONLY WITH THE SAME TYPE 8A 125V FUSE.
ATTENTION: POUR UNE PROTECTION CONTINUE LES RISQUES
D' INCENDIE N' UTILISERQUE DES FUSIBLE DE MÉME
TYPE 8A 125V

⚠ 6.3A 125V
CAUTION: FOR CONTINUED PROTECTION AGAINST FIRE HAZARD,
REPLACE ONLY WITH THE SAME TYPE 6.3A 125V FUSE.
ATTENTION: POUR UNE PROTECTION CONTINUE LES RISQUES
D' INCENDIE N' UTILISERQUE DES FUSIBLE DE MÉME
TYPE 6.3A 125V

IMPORTANT SAFETY NOTICE:
COMPONENTS IDENTIFIED BY THE SIGN ⚠ HAVE
SPECIAL CHARACTERISTICS IMPORTANT FOR SAFETY.
WHEN REPLACING ANY OF THESE COMPONENTS,
USE ONLY THE SPECIFIED PARTS.


POWER(AC-DC)
COLD
HOT
HOT
COLD
COLD
COLD
T1002 ETS39AG4K5NC
T1001 PT
IC1001 C5DACYY00003 (SWITCHING CONTROL)
HEAT SINK
DRAIN(C)
VIN
SOURCE(E)/OCL
VCC
GND
F/B
Z/C
D1001 B0EBNT000008
L1001 G0B123K00004
C1001 0.1u
6.3A 125V
F1001 K5D632AQ0002
Z1008 EYF52BCY
Z1007 EYF52BCY
IC1002 CNC1S101R1KT (FEED BACK)
IC1003 C0DAEZZ00003 (SHUNT REGULATOR)
TP1001
TP1002
TP1003
TP1004
TP1005
TP1006
CN1003 (TO MAIN P.C.B.) CN1101
Audio_+18V
Audio_+18V
Audio_GND
Audio_GND
STBY_+7V
AC_STOP
REG_+32V
TV_SUB_ON_H
LCD_DRIVE_+17V
REG_+9V
REG_+9V
GND
GND
GND
IC1004 C0DBZHG00012
CN1004
PR1001 D4FATR0[0]A002 7A
TV_SUB_ON_H
RELAY 12V
Q1001 B1AAGD000016 (+12V REGULATOR)
AC_STOP
TP813
TP810 WA10
TP805 WA10
(TO RF AMP POWER SUPPLY P.C.B.) CN851
RL801 K6B1AGA00093
RL802 K6B1AGA00093
Q801 2SD1819AHL (SWITCHING)
Q806 2SD1819AHL (SWITCHING)
Q803 2SD1819AHL (AC VOLTAGE DETECT)
Q804 2SD1819AHL (AC VOLTAGE DETECT)
Q805 2SD1819AHL (AC VOLTAGE DETECT)
T801 G4C2AAD00008
D802 B0EDKT000009
D811 MA3X152E0L
AC CORD For DLP(USA) LSJA0531
CN804
BLACK
WHITE
L
N
TP801
TP802
TP803
TP804
F801 K5D802AQ0004
8A 125V
D801 ERZV10V361CS
L802 G0B452L00001
L803 PT
GAP3.5

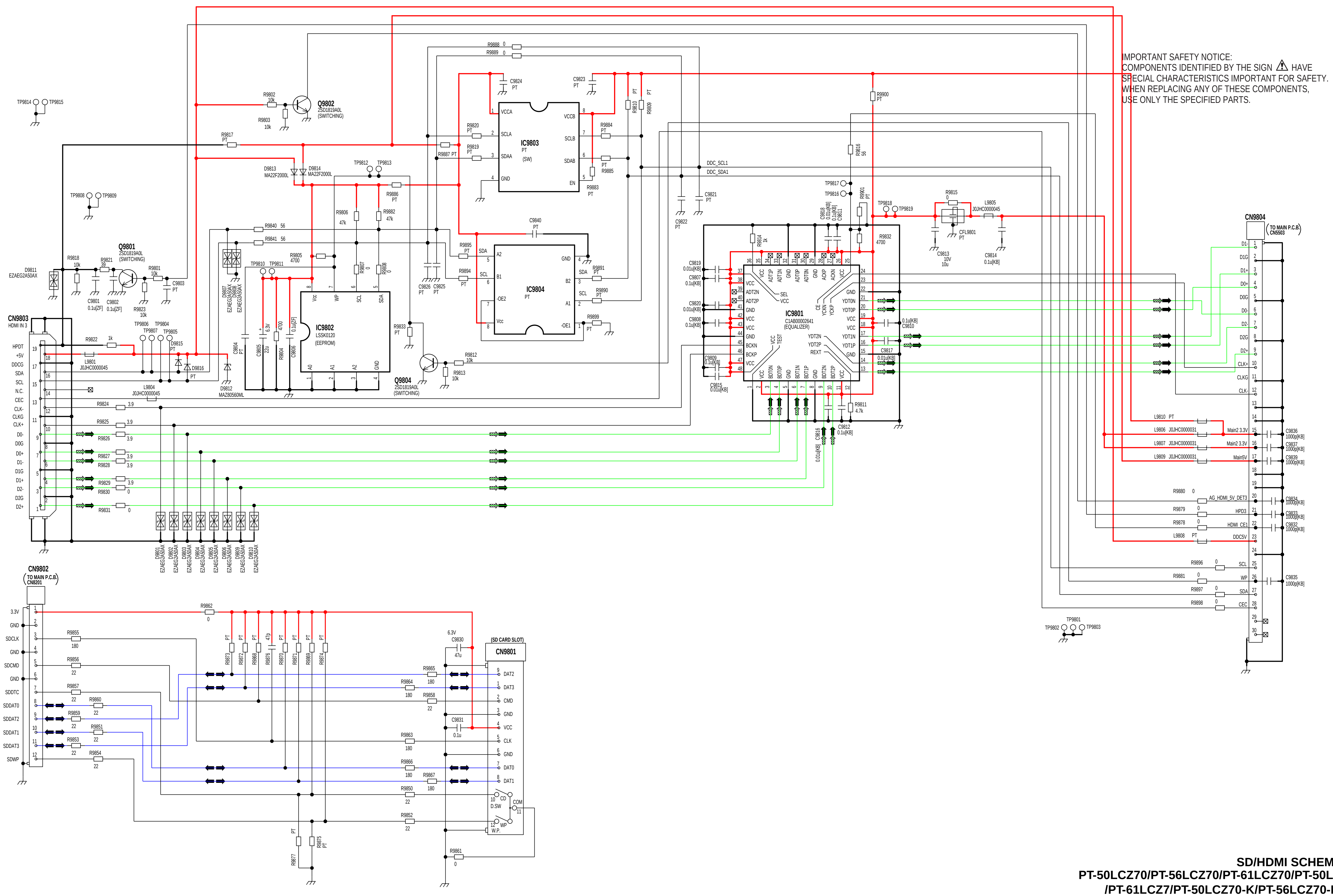
POWER SCHEMATIC DIAGRAM
PT-50LCZ70/PT-56LCZ70/PT-61LCZ70/PT-50LCZ7/PT-56LCZ7
/PT-61LCZ7/PT-50LCZ70-K/PT-56LCZ70-K/PT61LCZ70-K

12.4. SD/HDMI SCHEMATIC DIAGRAM

SD/HDMI SCHEMATIC DIAGRAM

SD/HDMI

VIDEO SIGNAL   AUDIO SIGNAL



CN9803
HDMI IN 3
HPDT
+5V
DDCG
SDA
SCL
N.C.
CEC
CLK-
CLKG
CLK+
D0-
D0G
D0+
D1-
D1G
D1+
D2-
D2G
D2+
Q9801
2SD1819A0L
(SWITCHING)
Q9802
2SD1819A0L
(SWITCHING)
Q9804
2SD1819A0L
(SWITCHING)
IC9802
L5SK0120
(EEPROM)
IC9803
PT
(SW)
VCCA
SCLA
SDAA
GND
VCCB
SCLB
SDAB
EN
IC9804
PT
IC9801
C1AB00002641
(EQUALIZER)
DDC_SCL1
DDC_SDA1
D9813
MA22F2000L
D9814
MA22F2000L
D9811
EZAEG2A50AX
D9812
MA2S0560ML
D9816
L9801
J0JHC0000045
L9804
J0JHC0000045
L9805
J0JHC0000045
CFL9801
PT
CN9804
TO MAIN P.C.B.
CN5503
Main2 3.3V
Main5V
AG_HDMI_5V_DET3
HPD3
HDMI_CE1
DDC5V
SCL
WP
SDA
CEC
L9806 J0JHC0000031
L9807 J0JHC0000031
L9809 J0JHC0000031
L9810 PT
L9808 PT
CN9802
TO MAIN P.C.B.
CN8201
3.3V
GND
SDCLK
GND
SDCMD
GND
SDDTC
SDDAT0
SDDAT2
SDDAT1
SDDAT3
SDWP
(SD CARD SLOT)
CN9801
DAT2
DAT3
CMD
GND
VCC
CLK
GND
DAT0
DAT1
CD
D.SW
COM
WP
W.P.
C9830
6.3V
47u
C9831
0.1u
TP9801
TP9802
TP9803

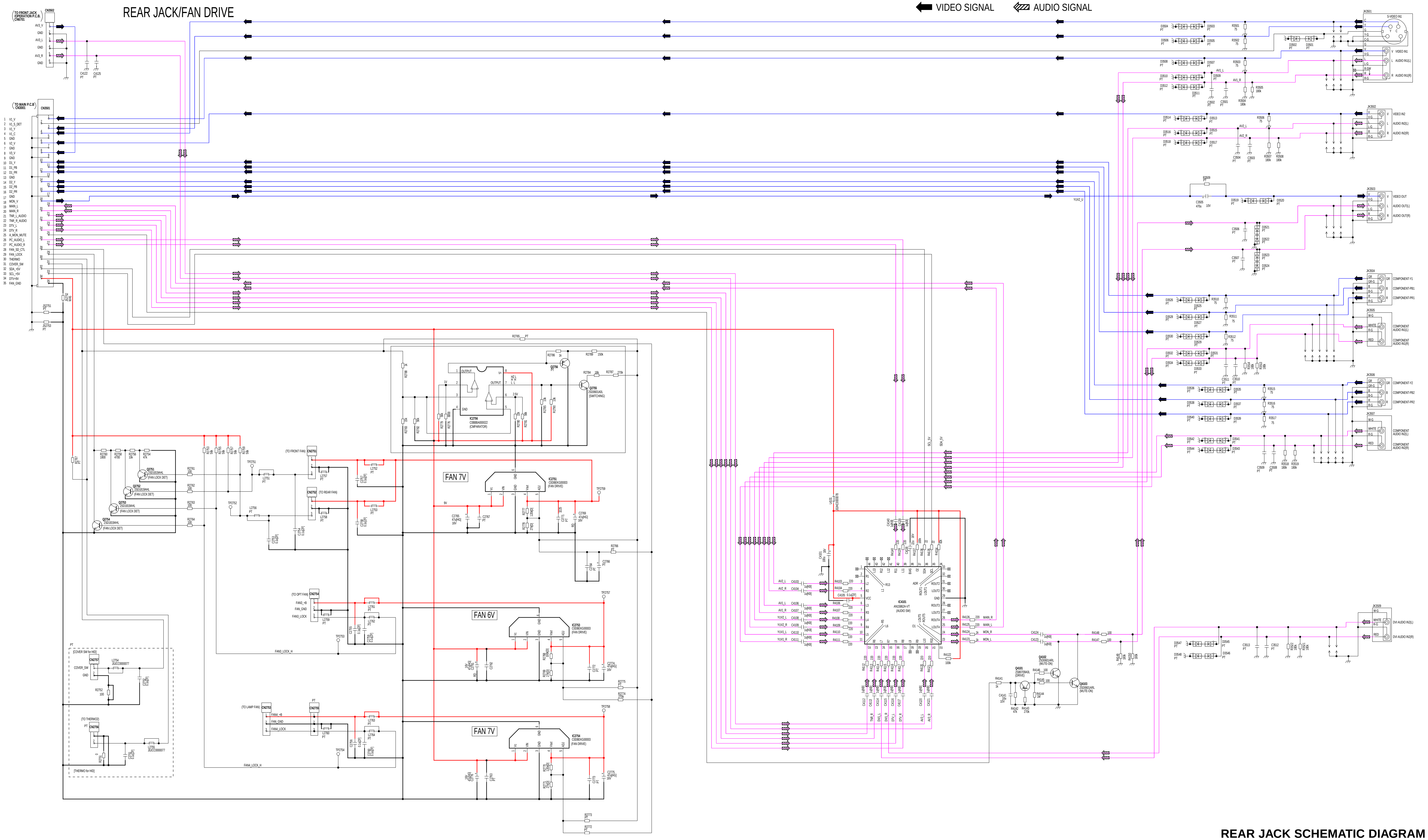
IMPORTANT SAFETY NOTICE:
COMPONENTS IDENTIFIED BY THE SIGN ⚠ HAVE SPECIAL CHARACTERISTICS IMPORTANT FOR SAFETY.
WHEN REPLACING ANY OF THESE COMPONENTS, USE ONLY THE SPECIFIED PARTS.

SD/HDMI SCHEMATIC DIAGRAM
PT-50LCZ70/PT-56LCZ70/PT-61LCZ70/PT-50LCZ7/PT-56LCZ7
/PT-61LCZ7/PT-50LCZ70-K/PT-56LCZ70-K/PT61LCZ70-K

12.5. REAR JACK SCHEMATIC DIAGRAM

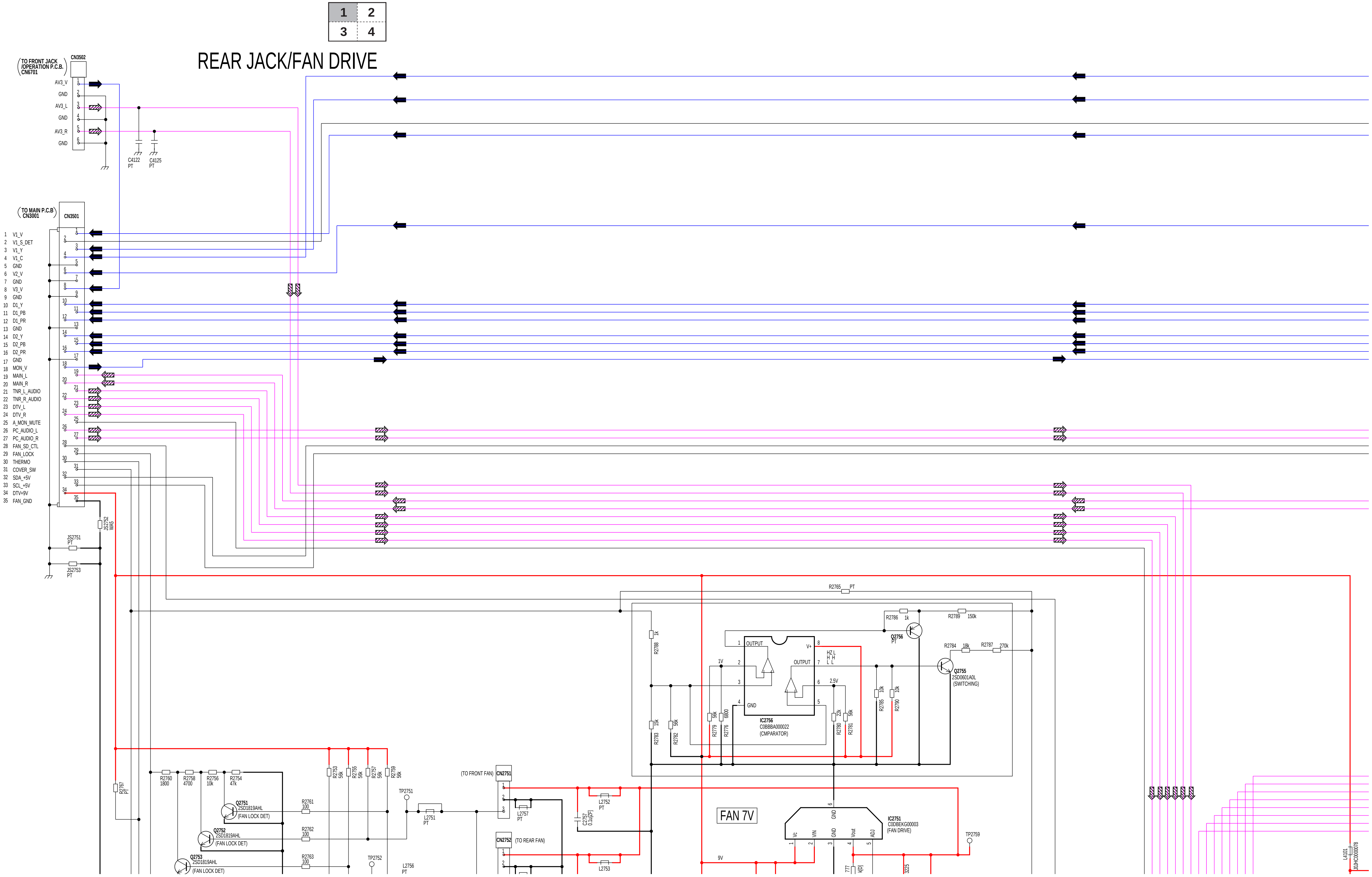
REAR JACK SCHEMATIC DIAGRAM

1	2
3	4


REAR JACK/FAN DRIVE
VIDEO SIGNAL
AUDIO SIGNAL
TO FRONT JACK /OPERATION P.C.B. CN6701
CN3502
AV3_V
GND
AV3_L
GND
AV3_R
GND
C4122 PT
C4125 PT
TO MAIN P.C.B CN3001
CN3501
1 V1_V
2 V1_S_DET
3 V1_Y
4 V1_C
5 GND
6 V2_V
7 GND
8 V3_V
9 GND
10 D1_Y
11 D1_PB
12 D1_PR
13 GND
14 D2_Y
15 D2_PB
16 D2_PR
17 GND
18 MON_V
19 MAIN_L
20 MAIN_R
21 TNR_L_AUDIO
22 TNR_R_AUDIO
23 DTV_L
24 DTV_R
25 A_MON_MUTE
26 PC_AUDIO_L
27 PC_AUDIO_R
28 FAN_SD_CTL
29 FAN_LOCK
30 THERMO
31 COVER_SW
32 SDA_+5V
33 SCL_+5V
34 DTV+9V
35 FAN_GND
JS2752 WA5
JS2751 PT
JS2753 PT
JK3501
S-VIDEO IN1
V VIDEO IN1
L AUDIO IN1(L)
R AUDIO IN1(R)
JK3502
V VIDEO IN2
L AUDIO IN2(L)
R AUDIO IN2(R)
JK3503
V VIDEO OUT
L AUDIO OUT(L)
R AUDIO OUT(R)
JK3504
GR COMPONENT-Y1
B COMPONENT-PB1
R COMPONENT-PR1
JK3505
WHITE COMPONENT AUDIO IN1(L)
RED COMPONENT AUDIO IN1(R)
JK3506
GR COMPONENT-Y2
B COMPONENT-PB2
R COMPONENT-PR2
JK3507
WHITE COMPONENT AUDIO IN2(L)
RED COMPONENT AUDIO IN2(R)
JK3508
DVI AUDIO IN(L)
DVI AUDIO IN(R)
IC2756
C0BBBA000022
(CMPARATOR)
Q2755
2SD0601A0L
(SWITCHING)
Q2756 PT
FAN 7V
IC2751
C0DBEKG00003
(FAN DRIVE)
FAN 6V
IC2753
C0DBEKG00003
(FAN DRIVE)
FAN 7V
IC2754
C0DBEKG00003
(FAN DRIVE)
TP2757
TP2758
TP2759
Q2751 2SD1819AHL (FAN LOCK DET)
Q2752 2SD1819AHL (FAN LOCK DET)
Q2753 2SD1819AHL (FAN LOCK DET)
Q2754 2SD1819AHL (FAN LOCK DET)
(TO FRONT FAN) CN2751
CN2752 (TO REAR FAN)
(TO OPT FAN) CN2754
FAN1_+B
FAN_GND
FAN1_LOCK
(TO LAMP FAN) CN2753
CN2755
FAN4_+B
FAN GND
FAN4_LOCK
FAN1_LOCK_H
FAN4_LOCK_H
(COVER SW for HID)
CN2757
COVER_SW
GND
(TO THERMO2)
CN2756
[THERMO for HID]
IC4101
AN15862A-VT
(AUDIO SW)
AV2_L
AV2_R
AV1_L
AV1_R
YUV2_L
YUV2_R
YUV1_L
YUV1_R
MAIN_R
MAIN_L
MON_R
MON_L
TNR_R
DVI1_L
DVI1_R
DTV_L
DTV_R
AV3_L
AV3_R
Q4101
2SB0709A0L
(DRIVE)
Q4102
2SD0601A0L
(MUTE-ON)
Q4103
2SD0601A0L
(MUTE-ON)

REAR JACK SCHEMATIC DIAGRAM
PT-50LCZ70/PT-56LCZ70/PT-61LCZ70/PT-50LCZ7/PT-56LCZ7
/PT-61LCZ7/PT-50LCZ70-K/PT-56LCZ70-K/PT61LCZ70-K

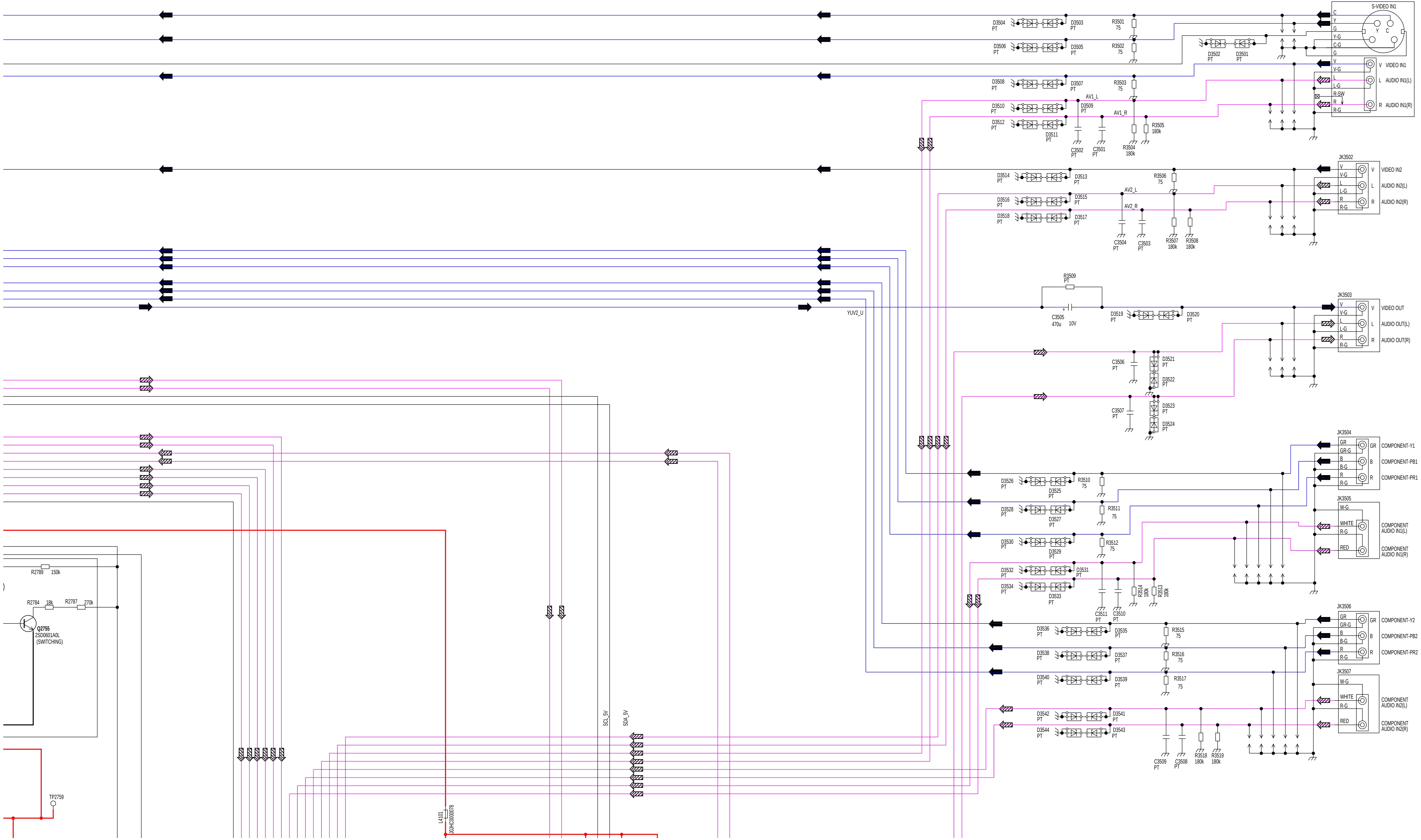
REAR JACK SCHEMATIC DIAGRAM


1
2
3
4
REAR JACK/FAN DRIVE
TO FRONT JACK (OPERATION P.C.B. CN6701
CN3502
AV3_V
GND
AV3_L
GND
AV3_R
GND
C4122 PT
C4125 PT
TO MAIN P.C.B CN3001
CN3501
1 V1_V
2 V1_S_DET
3 V1_Y
4 V1_C
5 GND
6 V2_V
7 GND
8 V3_V
9 GND
10 D1_Y
11 D1_PB
12 D1_PR
13 GND
14 D2_Y
15 D2_PB
16 D2_PR
17 GND
18 MON_V
19 MAIN_L
20 MAIN_R
21 TNR_L_AUDIO
22 TNR_R_AUDIO
23 DTV_L
24 DTV_R
25 A_MON_MUTE
26 PC_AUDIO_L
27 PC_AUDIO_R
28 FAN_SD_CTL
29 FAN_LOCK
30 THERMO
31 COVER_SW
32 SDA_+5V
33 SCL_+5V
34 DTV+9V
35 FAN_GND
JS2752 WA5
JS2751 PT
JS2753 PT
R2765 PT
R2786 1k
R2789 150k
Q2756 PT
R2784 18k
R2787 270k
Q2755 2SD0601A0L (SWITCHING)
R2788 1k
OUTPUT
V+
HZ L
H H
L L
1V
OUTPUT
2.5V
GND
IC2756 C0BBBA000022 (CMPARATOR)
R2783 15k
R2782 56k
R2779 56k
R2776 6800
R2780 22k
R2781 56k
R2785 10k
R2790 10k
R2767 PT
R2760 1800
R2758 4700
R2756 10k
R2754 47k
Q2751 2SD1819AHL (FAN LOCK DET)
Q2752 2SD1819AHL (FAN LOCK DET)
Q2753 2SD1819AHL (FAN LOCK DET)
R2761 100
R2762 100
R2763 100
R2753 56k
R2755 56k
R2757 56k
R2759 56k
TP2751
TP2752
L2751 PT
L2756 PT
(TO FRONT FAN) CN2751
CN2752 (TO REAR FAN)
L2757 PT
C2757 0.1u(ZF)
L2752 PT
L2753
FAN 7V
IC2751 C0DBEKG00003 (FAN DRIVE)
Vc
VIN
GND
GND
Vout
ADJ
9V
TP2759
L4101 J0JHC0000078

REAR JACK SCHEMATIC DIAGRAM

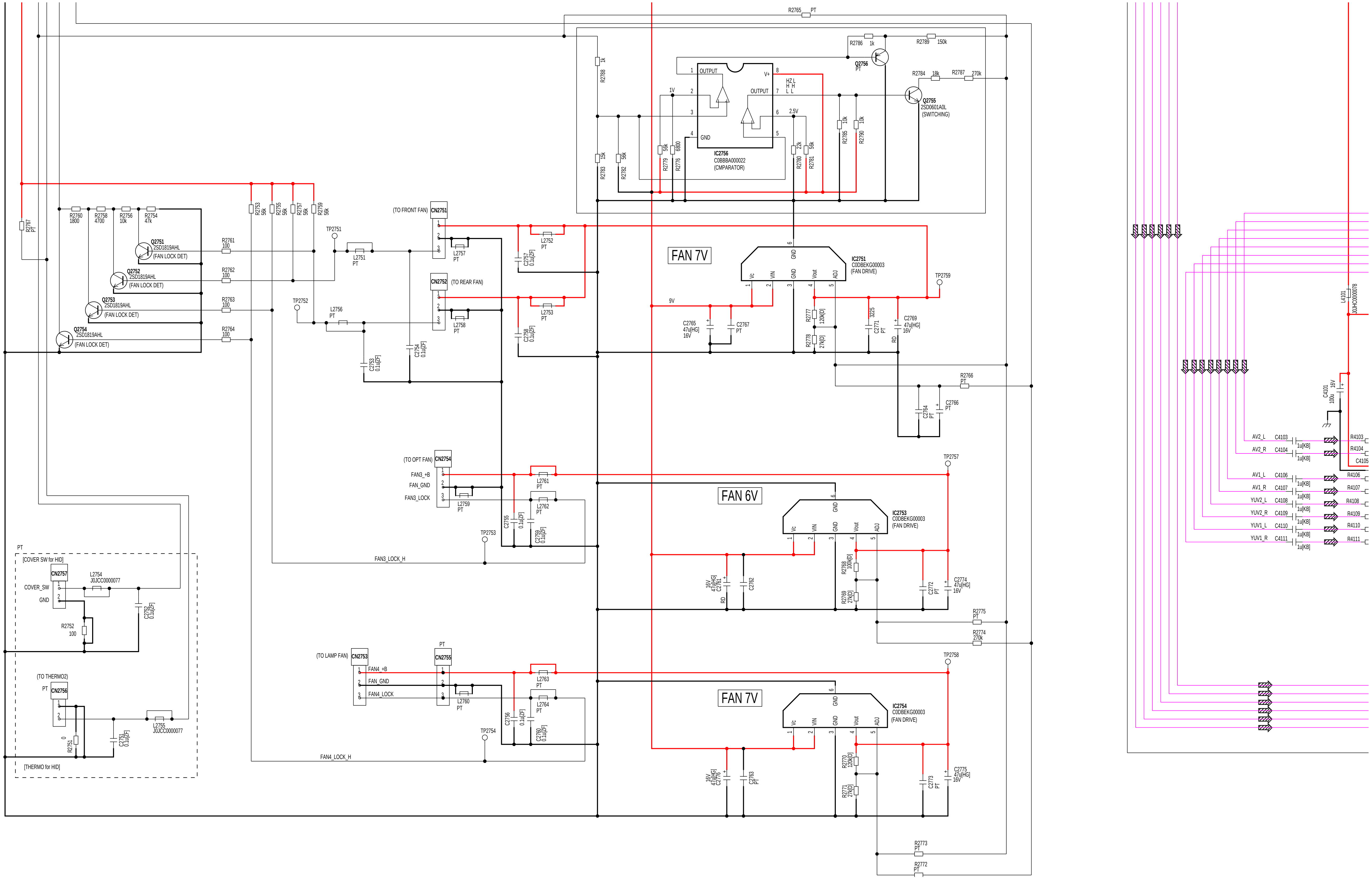
1	2
3	4

◀ VIDEO SIGNAL ▨ AUDIO SIGNAL


JK3501
S-VIDEO IN1
C
Y
G
Y-G
C-G
G
V
V-G
L
L-G
R-SW
R
R-G
V VIDEO IN1
L AUDIO IN1(L)
R AUDIO IN1(R)
D3504 PT
D3503 PT
R3501 75
D3506 PT
D3505 PT
R3502 75
D3502 PT
D3501 PT
D3508 PT
D3507 PT
R3503 75
AV1_L
D3510 PT
D3509 PT
AV1_R
D3512 PT
D3511 PT
R3505 180k
C3502 PT
C3501 PT
R3504 180k
JK3502
V VIDEO IN2
V-G
L AUDIO IN2(L)
L-G
R AUDIO IN2(R)
R-G
D3514 PT
D3513 PT
R3506 75
AV2_L
D3516 PT
D3515 PT
AV2_R
D3518 PT
D3517 PT
C3504 PT
C3503 PT
R3507 180k
R3508 180k
R3509 PT
YUV2_U
C3505 470u 10V
D3519 PT
D3520 PT
JK3503
V VIDEO OUT
V-G
L AUDIO OUT(L)
L-G
R AUDIO OUT(R)
R-G
C3506 PT
D3521 PT
D3522 PT
C3507 PT
D3523 PT
D3524 PT
JK3504
GR GR COMPONENT-Y1
GR-G
B B COMPONENT-PB1
B-G
R R COMPONENT-PR1
R-G
D3526 PT
D3525 PT
R3510 75
D3528 PT
D3527 PT
R3511 75
D3530 PT
D3529 PT
R3512 75
JK3505
W-G
WHITE
R-G
RED
COMPONENT AUDIO IN1(L)
COMPONENT AUDIO IN1(R)
D3532 PT
D3531 PT
D3534 PT
D3533 PT
R3514 180k
R3513 180k
C3511 PT
C3510 PT
JK3506
GR GR COMPONENT-Y2
GR-G
B B COMPONENT-PB2
B-G
R R COMPONENT-PR2
R-G
D3536 PT
D3535 PT
R3515 75
D3538 PT
D3537 PT
R3516 75
D3540 PT
D3539 PT
R3517 75
JK3507
W-G
WHITE
R-G
RED
COMPONENT AUDIO IN2(L)
COMPONENT AUDIO IN2(R)
D3542 PT
D3541 PT
D3544 PT
D3543 PT
C3509 PT
C3508 PT
R3518 180k
R3519 180k
R2789 150k
R2784 18k
R2787 270k
Q2755
2SD0601A0L
(SWITCHING)
TP2759
L4101
J0JHC0000078
SCL_5V
SDA_5V

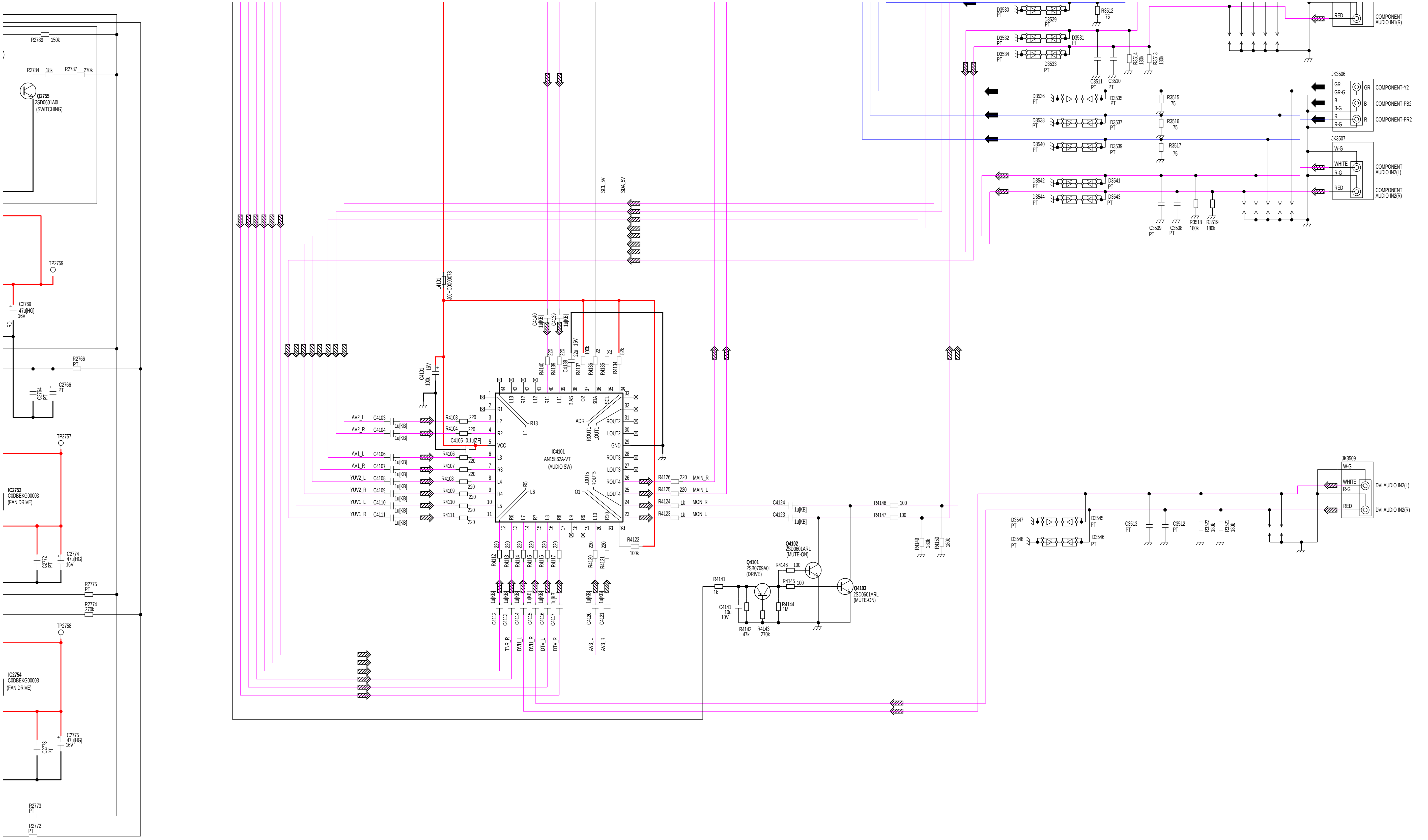
REAR JACK SCHEMATIC DIAGRAM

1	2
3	4


R2765 PT
R2788 1k
R2783 15k
R2782 56k
1 OUTPUT
8 V+
1V
2
3
4 GND
OUTPUT 7
6 2.5V
5
HZ L
H H
L L
R2779 56k
R2776 6800
IC2756
C0BBBA000022
(CMPARATOR)
R2780 22k
R2781 56k
R2785 10k
R2790 10k
R2786 1k
R2789 150k
Q2756
PT
R2784 18k
R2787 270k
Q2755
2SD0601A0L
(SWITCHING)
R2767 PT
R2760 1800
R2758 4700
R2756 10k
R2754 47k
Q2751 2SD1819AHL (FAN LOCK DET)
Q2752 2SD1819AHL (FAN LOCK DET)
Q2753 2SD1819AHL (FAN LOCK DET)
Q2754 2SD1819AHL (FAN LOCK DET)
R2761 100
R2762 100
R2763 100
R2764 100
R2753 56k
R2755 56k
R2757 56k
R2759 56k
TP2751
TP2752
L2751 PT
L2756 PT
C2753 0.1u[ZF]
C2754 0.1u[ZF]
(TO FRONT FAN) CN2751
CN2752 (TO REAR FAN)
1
2
3
L2757 PT
L2758 PT
L2752 PT
L2753 PT
C2757 0.1u[ZF]
C2758 0.1u[ZF]
FAN 7V
IC2751
C0DBEKG00003
(FAN DRIVE)
Vc
VIN
GND
Vout
ADJ
9V
C2765 47u[HG] 16V
C2767 PT
R2777 120k[D]
R2778 27k[D]
3225
C2771 PT
C2769 47u[HG] 16V
RD
TP2759
R2766 PT
C2764 PT
C2766 PT
TP2757
(TO OPT FAN) CN2754
FAN3_+B
FAN_GND
FAN3_LOCK
L2759 PT
L2761 PT
L2762 PT
C2755 0.1u[ZF]
C2759 0.1u[ZF]
TP2753
FAN3_LOCK_H
FAN 6V
IC2753
C0DBEKG00003
(FAN DRIVE)
16V 47u[HG] C2761
RD
C2762
R2768 100k[D]
R2769 27k[D]
C2772 PT
C2774 47u[HG] 16V
R2775 PT
R2774 270k
TP2758
(TO LAMP FAN) CN2753
FAN4_+B
FAN_GND
FAN4_LOCK
PT
CN2755
L2760 PT
L2763 PT
L2764 PT
C2756 0.1u[ZF]
C2760 0.1u[ZF]
TP2754
FAN4_LOCK_H
FAN 7V
IC2754
C0DBEKG00003
(FAN DRIVE)
16V 47u[HG] C2776
C2763 PT
R2770 120k[D]
R2771 27k[D]
C2773 PT
C2775 47u[HG] 16V
R2773 PT
R2772 PT
PT
[COVER SW for HID]
CN2757
COVER_SW
GND
L2754 J0JCC0000077
C2752 0.1u[ZF]
R2752 100
(TO THERMO2)
PT
CN2756
R2751 0
C2751 0.1u[ZF]
L2755 J0JCC0000077
[THERMO for HID]
L4101 J0JHC0000078
C4101 100u 16V
AV2_L C4103 1u[KB] R4103
AV2_R C4104 1u[KB] R4104
C4105
AV1_L C4106 1u[KB] R4106
AV1_R C4107 1u[KB] R4107
YUV2_L C4108 1u[KB] R4108
YUV2_R C4109 1u[KB] R4109
YUV1_L C4110 1u[KB] R4110
YUV1_R C4111 1u[KB] R4111

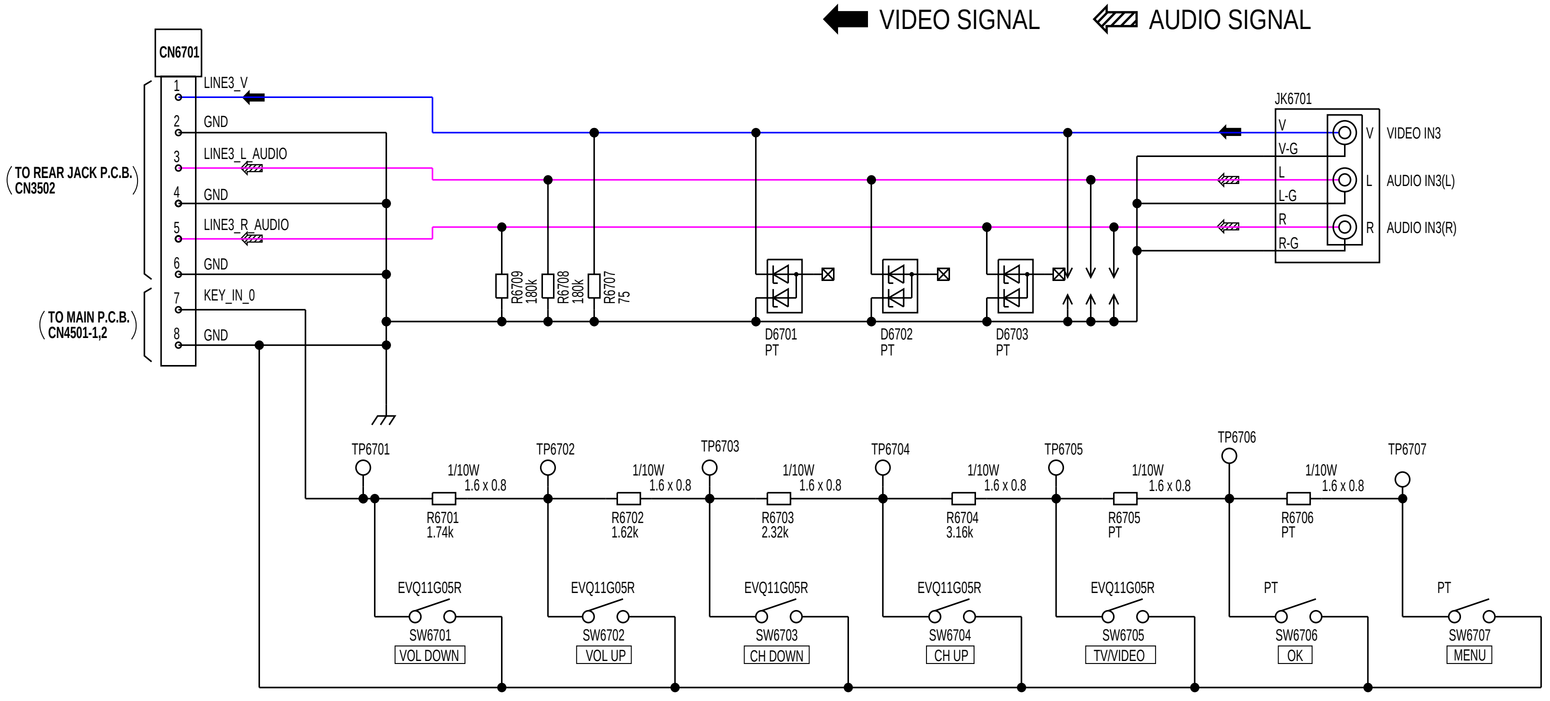
REAR JACK SCHEMATIC DIAGRAM

1	2
3	4

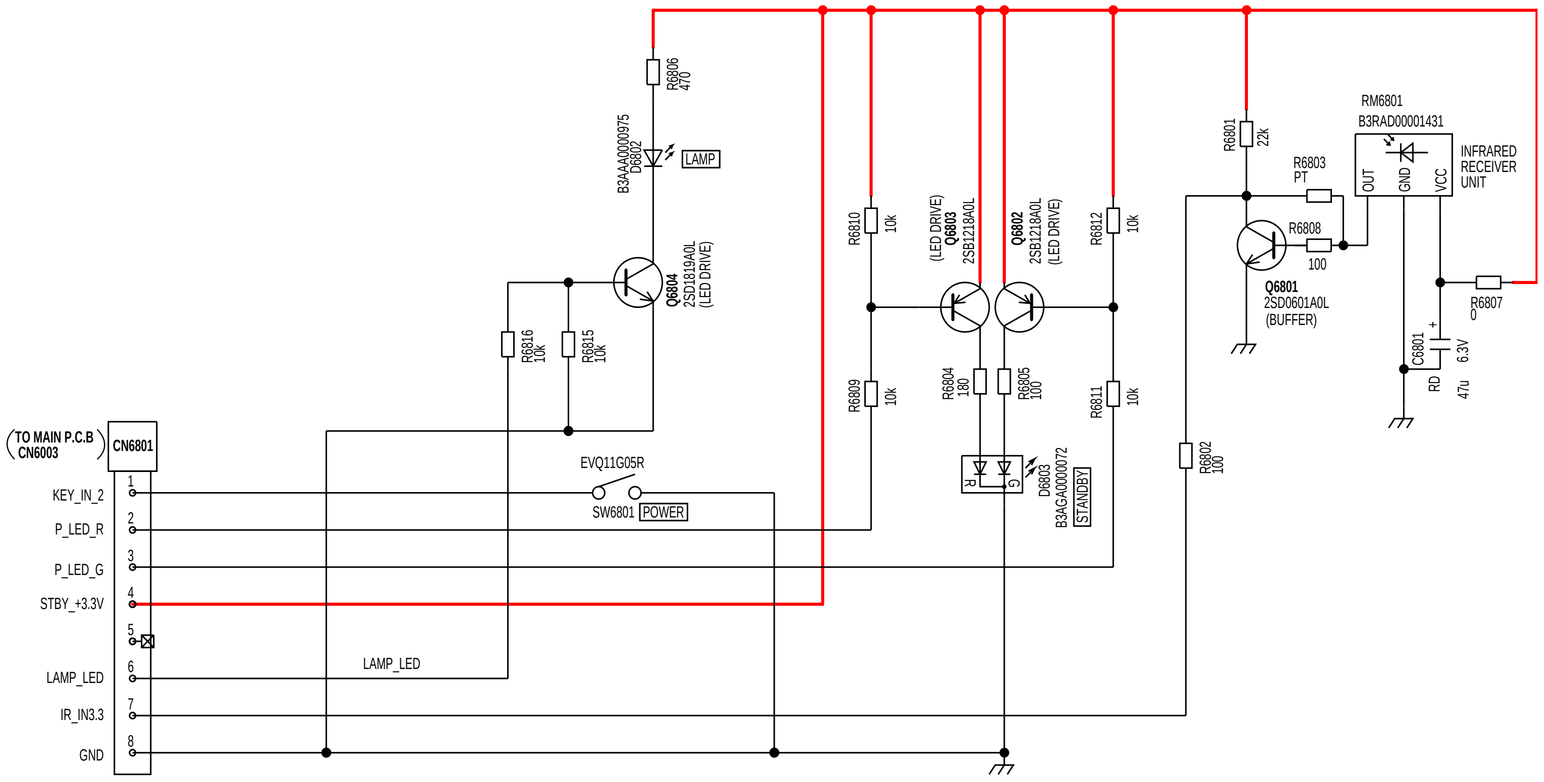

R2789 150k
R2784 18k
R2787 270k
Q2755
2SD0601A0L
(SWITCHING)
TP2759
C2769
47u[HG]
16V
RD
R2766
PT
C2764
PT
C2766
PT
TP2757
IC2753
C0DBEKG00003
(FAN DRIVE)
C2772
PT
C2774
47u[HG]
16V
R2775
PT
R2774
270k
TP2758
IC2754
C0DBEKG00003
(FAN DRIVE)
C2773
PT
C2775
47u[HG]
16V
R2773
PT
R2772
PT
L4101
J0JHC0000078
C4101
100u
16V
C4140
1u[KB]
C4139
1u[KB]
SCL_5V
SDA_5V
R4140 220
R4139 220
C4138 22u 16V
R4137 100k
R4136 22
R4135 22
R4134 82k
AV2_L C4103 1u[KB]
AV2_R C4104 1u[KB]
AV1_L C4106 1u[KB]
AV1_R C4107 1u[KB]
YUV2_L C4108 1u[KB]
YUV2_R C4109 1u[KB]
YUV1_L C4110 1u[KB]
YUV1_R C4111 1u[KB]
R4103 220
R4104 220
C4105 0.1u[ZF]
R4106 220
R4107 220
R4108 220
R4109 220
R4110 220
R4111 220
IC4101
AN15862A-VT
(AUDIO SW)
R1 L2 R2 VCC L3 R3 L4 R4 L5
L13 R12 L12 R11 L11 BIAS O2 SDA SCL
ROUT2 LOUT2 GND ROUT3 LOUT3 ROUT4 LOUT4
R6 L7 R7 L8 R8 L9 R9 L10 R10
R13 L1 ADR ROUT1 LOUT1 R5 L6 O1 LOUT5 ROUT5
R4126 220 MAIN_R
R4125 220 MAIN_L
R4124 1k MON_R
R4123 1k MON_L
R4122 100k
R4112 220
R4113 220
R4114 220
R4115 220
R4116 220
R4117 220
R4120 220
R4121 220
C4112 1u[KB]
C4113 1u[KB] TNR_R
C4114 1u[KB] DVI1_L
C4115 1u[KB] DVI1_R
C4116 1u[KB] DTV_L
C4117 1u[KB] DTV_R
C4120 1u[KB] AV3_L
C4121 1u[KB] AV3_R
C4124 1u[KB]
C4123 1u[KB]
R4148 100
R4147 100
R4149 180k
R4150 180k
Q4102
2SD0601ARL
(MUTE-ON)
Q4101
2SB0709A0L
(DRIVE)
R4146 100
R4145 100
Q4103
2SD0601ARL
(MUTE-ON)
R4141 1k
C4141 10u 10V
R4144 1M
R4142 47k
R4143 270k
D3530 PT
D3529 PT
R3512 75
D3532 PT
D3531 PT
D3534 PT
D3533 PT
C3511 PT
C3510 PT
R3514 180k
R3513 180k
RED
COMPONENT AUDIO IN1(R)
JK3506
GR
GR-G
B
B-G
R
R-G
COMPONENT-Y2
COMPONENT-PB2
COMPONENT-PR2
D3536 PT
D3535 PT
R3515 75
D3538 PT
D3537 PT
R3516 75
D3540 PT
D3539 PT
R3517 75
JK3507
W-G
WHITE
R-G
RED
COMPONENT AUDIO IN2(L)
COMPONENT AUDIO IN2(R)
D3542 PT
D3541 PT
D3544 PT
D3543 PT
C3509 PT
C3508 PT
R3518 180k
R3519 180k
JK3509
W-G
WHITE
R-G
RED
DVI AUDIO IN2(L)
DVI AUDIO IN2(R)
D3547 PT
D3545 PT
D3548 PT
D3546 PT
C3513 PT
C3512 PT
R3522 180k
R3521 180k

12.6. FRONT JACK/OPERATION / POWER SWITCH / TUNER SCHEMATIC DIAGRAM

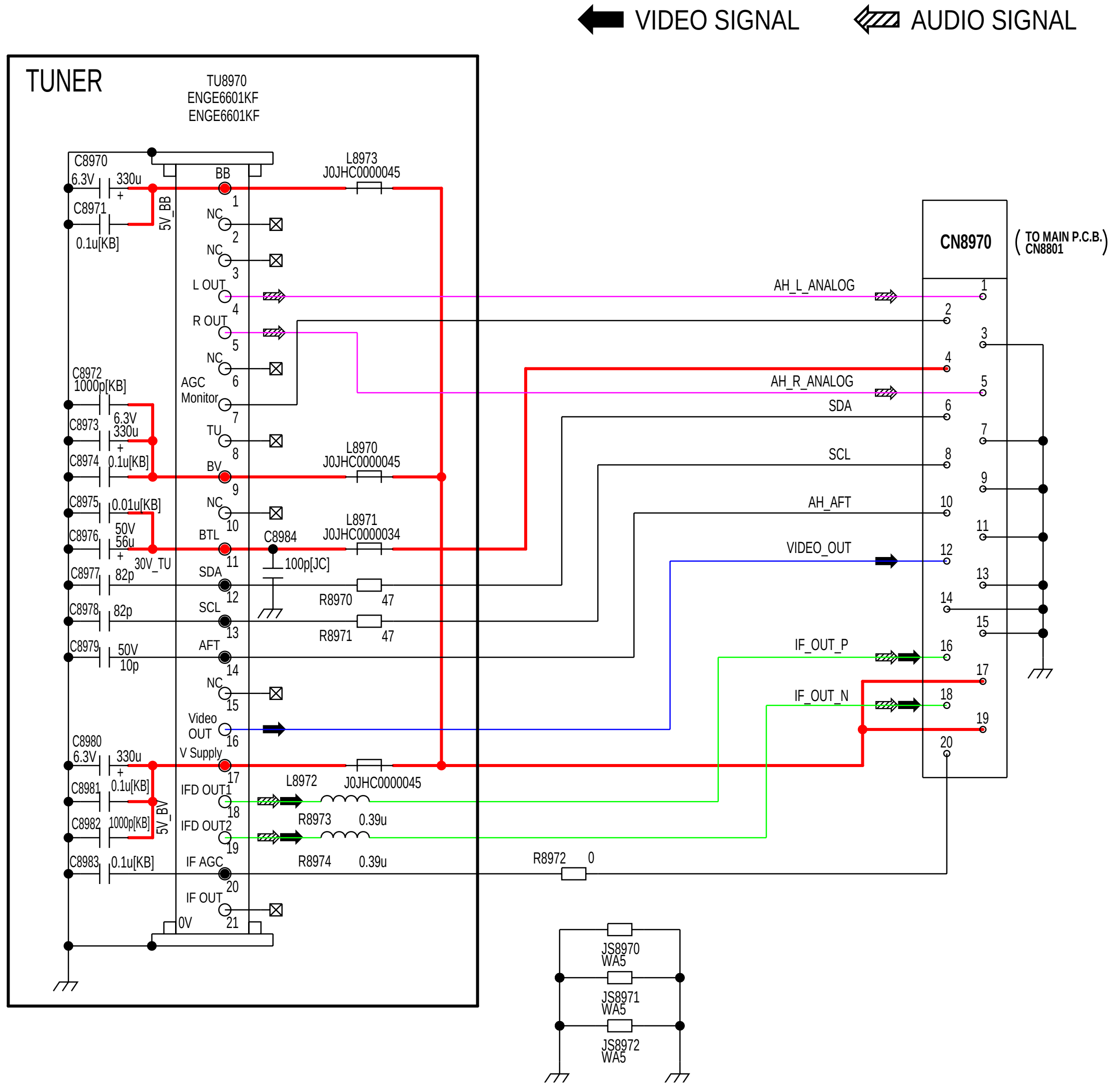
FRONT JACK/OPERATION SCHEMATIC DIAGRAM


VIDEO SIGNAL
AUDIO SIGNAL
CN6701
LINE3_V
GND
LINE3_L_AUDIO
GND
LINE3_R_AUDIO
GND
KEY_IN_0
GND
TO REAR JACK P.C.B. CN3502
TO MAIN P.C.B. CN4501-1,2
JK6701
VIDEO IN3
AUDIO IN3(L)
AUDIO IN3(R)
R6709 180k
R6708 180k
R6707 75
D6701 PT
D6702 PT
D6703 PT
TP6701
TP6702
TP6703
TP6704
TP6705
TP6706
TP6707
R6701 1.74k
R6702 1.62k
R6703 2.32k
R6704 3.16k
R6705 PT
R6706 PT
1/10W 1.6 x 0.8
EVQ11G05R
SW6701 VOL DOWN
SW6702 VOL UP
SW6703 CH DOWN
SW6704 CH UP
SW6705 TV/VIDEO
SW6706 OK
SW6707 MENU

POWER SWITCH/OPERATION SCHEMATIC DIAGRAM


TO MAIN P.C.B CN6003
CN6801
KEY_IN_2
P_LED_R
P_LED_G
STBY_+3.3V
LAMP_LED
IR_IN3.3
GND
LAMP_LED
EVQ11G05R
SW6801 POWER
R6806 470
B3AAA0000975 D6802
LAMP
Q6804 2SD1819A0L (LED DRIVE)
R6816 10k
R6815 10k
R6810 10k
R6809 10k
Q6803 2SB1218A0L (LED DRIVE)
Q6802 2SB1218A0L (LED DRIVE)
R6804 180
R6805 100
D6803 B3AGA0000072 STANDBY
R6812 10k
R6811 10k
R6801 22k
R6803 PT
R6808 100
Q6801 2SD0601A0L (BUFFER)
R6802 100
RM6801 B3RAD0001431
OUT GND VCC
INFRARED RECEIVER UNIT
R6807 0
C6801 6.3V 47u RD

TUNER SCHEMATIC DIAGRAM


VIDEO SIGNAL
AUDIO SIGNAL
TUNER
TU8970 ENGE6601KF ENGE6601KF
C8970 6.3V 330u
C8971 0.1u[KB]
C8972 1000p[KB]
C8973 6.3V 330u
C8974 0.1u[KB]
C8975 0.01u[KB]
C8976 50V 56u
C8977 82p
C8978 82p
C8979 50V 10p
C8980 6.3V 330u
C8981 0.1u[KB]
C8982 1000p[KB]
C8983 0.1u[KB]
C8984 100p[JC]
5V_BB
30V_TU
5V_BV
BB
NC
L OUT
R OUT
AGC Monitor
TU
BV
BTL
SDA
SCL
AFT
Video OUT
V Supply
IFD OUT1
IFD OUT2
IF AGC
IF OUT
0V
L8973 J0JHC0000045
L8970 J0JHC0000045
L8971 J0JHC0000034
L8972 J0JHC0000045
R8970 47
R8971 47
R8973 0.39u
R8974 0.39u
R8972 0
CN8970
TO MAIN P.C.B. CN8801
AH_L_ANALOG
AH_R_ANALOG
SDA
SCL
AH_AFT
VIDEO_OUT
IF_OUT_P
IF_OUT_N
JS8970 WA5
JS8971 WA5
JS8972 WA5

FRONT JACK/OPERATION SCHEMATIC DIAGRAM
POWER SWITCH/OPERATION SCHEMATIC DIAGRAM
TUNER SCHEMATIC DIAGRAM
PT-50LCZ70/PT-56LCZ70/PT-61LCZ70/PT-50LCZ7/PT-56LCZ7
/PT-61LCZ7/PT-50LCZ70-K/PT-56LCZ70-K/PT61LCZ70-K

13 Printed Circuit Board

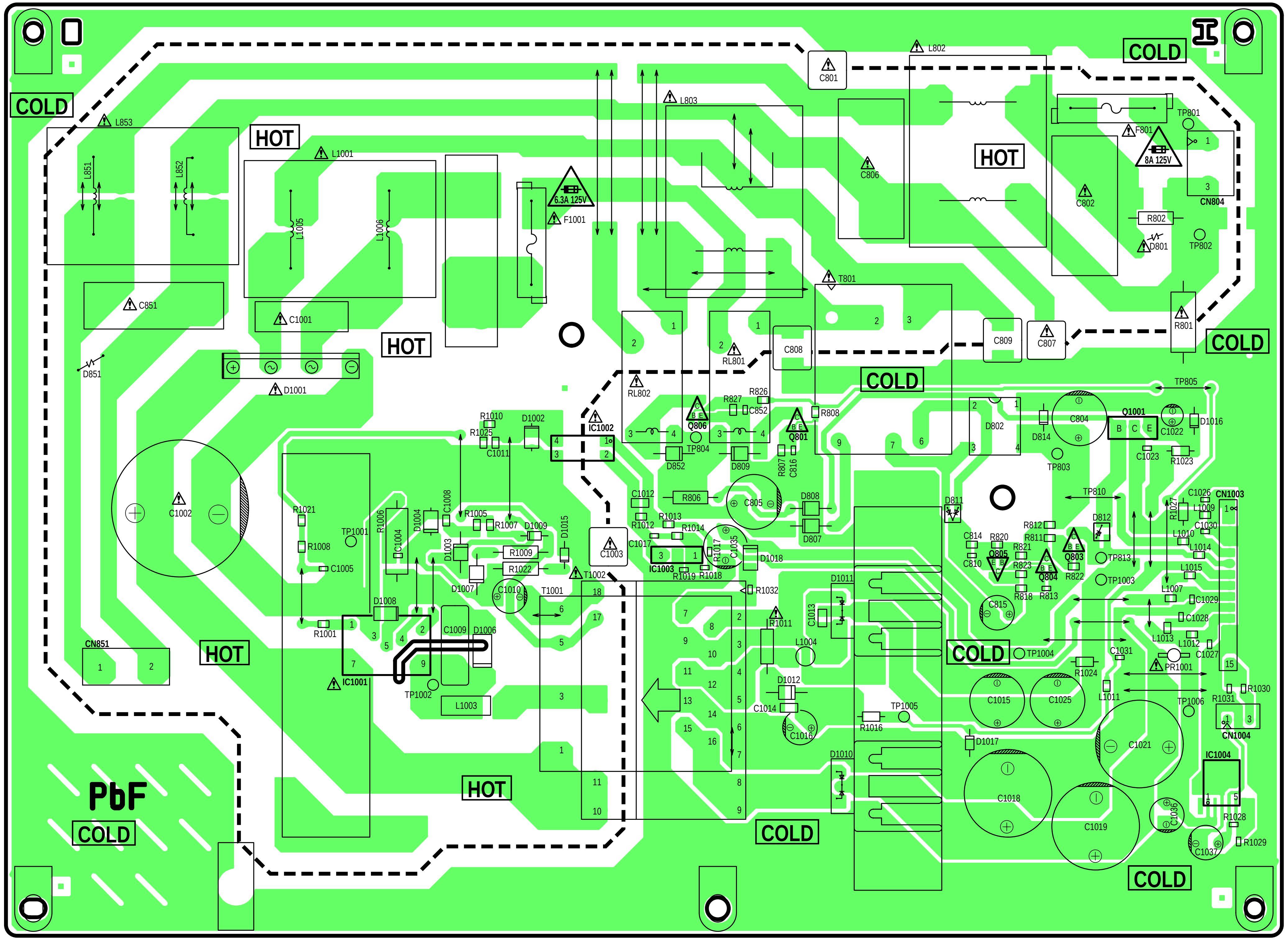
13.1. POWER P.C.B.

POWER P.C.B. LSEP3237B

⚠ 6.3A 125V
CAUTION: FOR CONTINUED PROTECTION AGAINST FIRE HAZARD,
REPLACE ONLY WITH THE SAME TYPE 6.3A 125V FUSE.
ATTENTION: POUR UNE PROTECTION CONTINUE LES RISQUES
D' INCENDIE N' UTILISERQUE DES FUSIBLE DE MÉME
TYPE 6.3A 125V

⚠ 8A 125V
CAUTION: FOR CONTINUED PROTECTION AGAINST FIRE HAZARD,
REPLACE ONLY WITH THE SAME TYPE 8A 125V FUSE.
ATTENTION: POUR UNE PROTECTION CONTINUE LES RISQUES
D' INCENDIE N' UTILISERQUE DES FUSIBLE DE MÉME
TYPE 8A 125V

IMPORTANT SAFETY NOTICE:
COMPONENTS IDENTIFIED BY THE SIGN ⚠ HAVE
SPECIAL CHARACTERISTICS IMPORTANT FOR SAFETY.
WHEN REPLACING ANY OF THESE COMPONENTS,
USE ONLY THE SPECIFIED PARTS.


COLD
HOT
PbF
L853
L851
L852
L1001
L1005
L1006
6.3A 125V
F1001
L803
C801
L802
C806
C802
8A 125V
F801
TP801
CN804
R802
D801
TP802
T801
R801
C809
C807
C808
RL801
RL802
C851
C1001
D851
D1001
C1002
R1010
R1025
D1002
C1011
IC1002
Q806
TP804
D852
R827
R826
C852
Q801
R808
D809
R807
C816
D802
D814
C804
Q1001
B C E
C1022
D1016
C1023
R1023
TP803
TP805
TP810
C1012
R806
R1013
R1014
C805
D808
D807
R1005
R1007
D1009
R1009
R1022
R1021
TP1001
R1008
C1005
R1006
C1004
D1004
C1008
D1003
D1015
C1003
T1002
C1017
IC1003
R1019
R1018
C1035
R1017
D1018
D811
C814
R820
C810
Q805
R821
R823
R812
R811
D812
Q803
TP813
Q804
R822
R818
R813
TP1003
C1026
CN1003
R1027
L1009
C1030
L1010
L1014
L1015
L1007
C1029
C1028
L1013
L1012
C1031
C1027
PR1001
R1024
C815
D1007
C1010
T1001
D1008
C1009
D1006
R1001
IC1001
TP1002
L1003
CN851
R1032
R1011
D1011
C1013
L1004
D1012
C1014
C1016
R1016
TP1005
D1010
TP1004
C1015
C1025
L1011
C1021
TP1006
R1031
R1030
CN1004
D1017
C1018
C1019
IC1004
C1036
R1028
C1037
R1029
LSJB3237

HOT CIRCUIT. BE CAREFUL AND USE AN ISOLATION TRANSFORMER WHEN SERVICING.

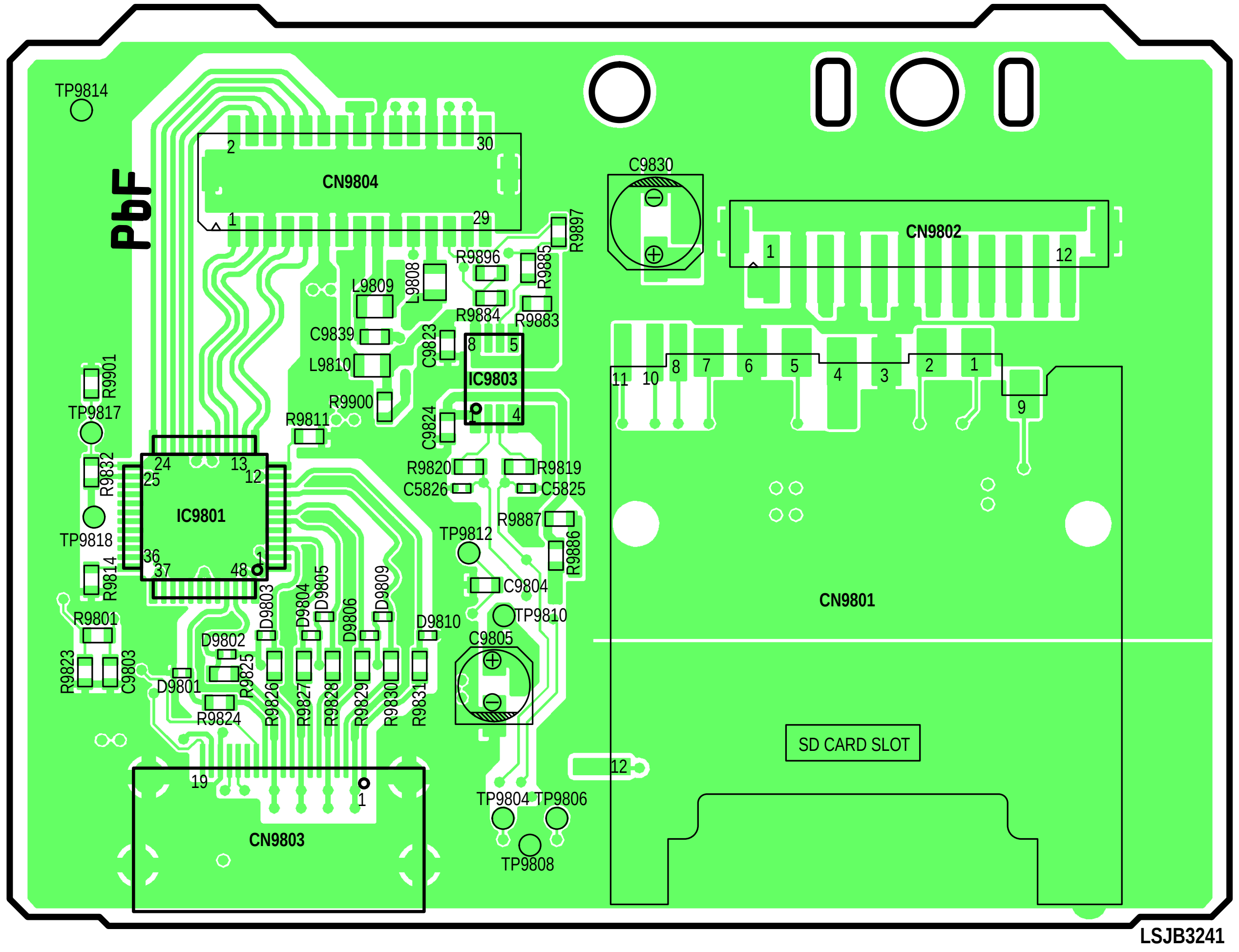
POWER P.C.B. LSEP3237B
PT-50LCZ70/PT-56LCZ70/PT-61LCZ70/PT-50LCZ7/PT-56LCZ7
/PT-61LCZ7/PT-50LCZ70-K/PT-56LCZ70-K/PT61LCZ70-K

13.2. SD/HDMI P.C.B.

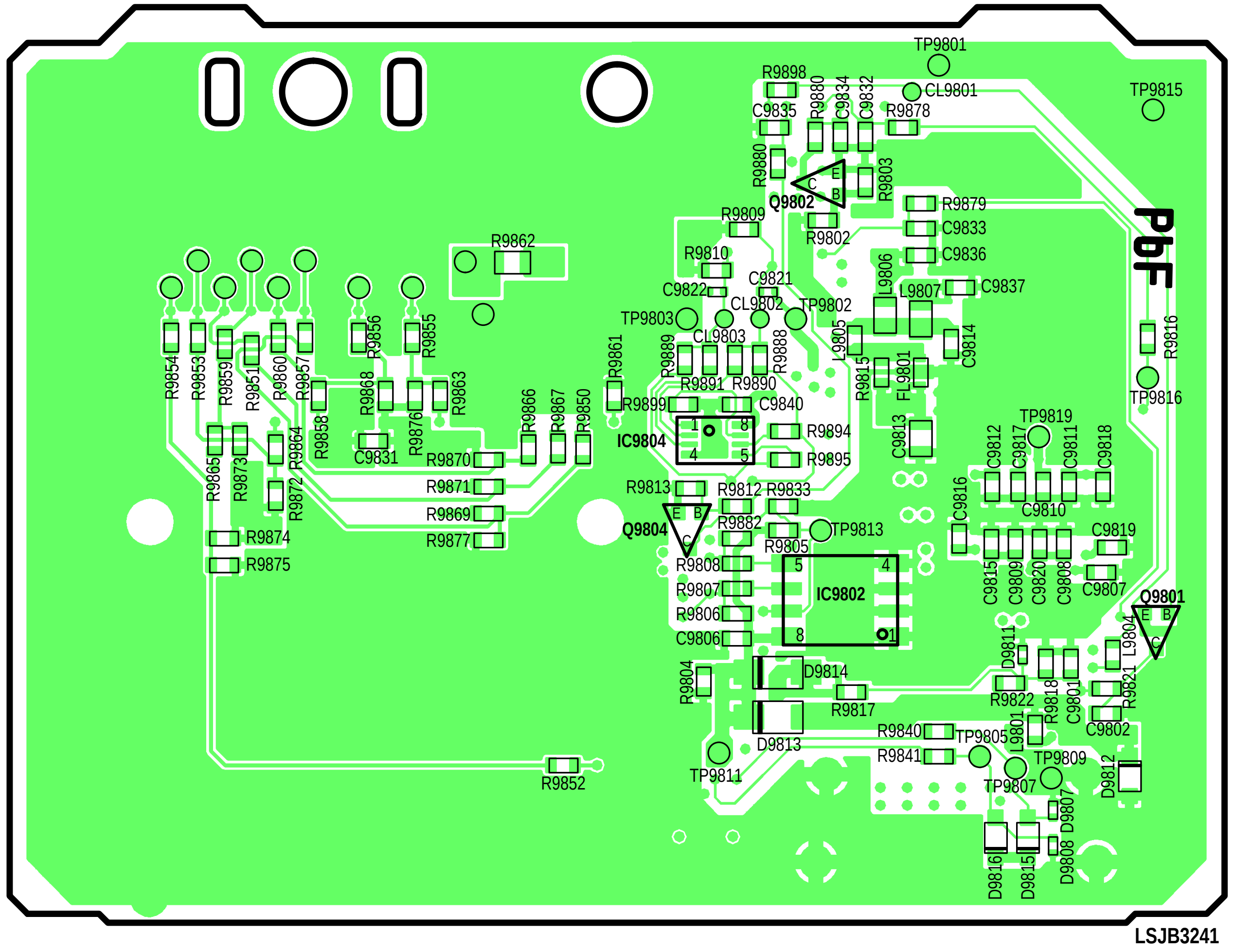
SD/HDMI P.C.B. LSEP3241A

NOTE: MULTILAYER P.C.B.
THIS P.C.B. IS Multi-Layer P.C.B. THIS CIRCUIT BOARD SHOWS COMPONENT LAYOUT-PATTERN FOR COMPONENT SIDE AND FOIL SIDE. LAYOUT PATETRNS ARE SINGLE PATTERN FOR EACH SIDE THAT MAKE EASY TO SIGHT THE COMPONENT LAYOUT.

(COMPONENT SIDE)


TP9814
PbF
CN9804
2
30
1
29
C9830
CN9802
1
12
R9897
R9896
R9885
L9809
L9808
R9884
R9883
C9839
C9823
L9810
IC9803
8
5
4
R9900
R9901
TP9817
R9811
C9824
11
10
8
7
6
5
4
3
2
1
9
R9820
R9819
C5826
C5825
R9832
24
25
13
12
IC9801
TP9818
R9814
36
37
48
1
R9887
TP9812
R9886
C9804
TP9810
D9803
D9804
D9805
D9806
D9809
D9810
C9805
R9801
D9802
R9823
C9803
D9801
R9825
R9826
R9827
R9828
R9829
R9830
R9831
R9824
CN9801
SD CARD SLOT
12
19
CN9803
TP9804
TP9806
TP9808
LSJB3241

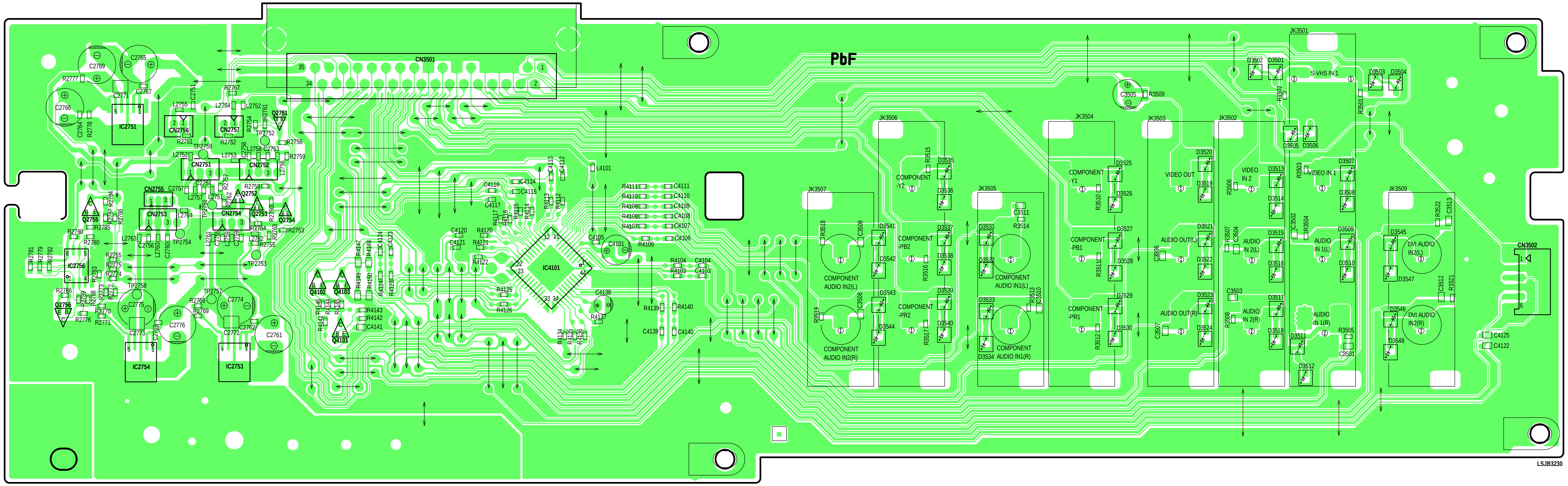
(FOIL SIDE)


TP9801
R9898
CL9801
TP9815
C9835
R9880
C9834
C9832
R9878
R9880
Q9802
R9803
R9809
R9802
R9879
C9833
C9836
PbF
R9862
R9810
L9806
L9807
C9837
C9822
C9821
CL9802
TP9802
TP9803
CL9803
R9888
L9805
R9816
R9854
R9853
R9859
R9851
R9860
R9857
R9868
R9856
R9855
R9876
R9863
R9866
R9867
R9850
R9861
R9889
R9891
R9890
R9815
FL9801
C9814
TP9816
R9899
C9840
IC9804
1
8
4
5
R9894
C9813
R9895
TP9819
C9812
C9817
C9811
C9818
R9865
R9873
R9864
R9872
R9858
C9831
R9870
R9871
R9869
R9877
R9813
R9812
R9833
C9810
Q9804
E
B
C
R9882
TP9813
C9816
C9819
R9874
R9875
R9805
R9808
5
4
IC9802
C9815
C9809
C9820
C9808
C9807
R9807
R9806
C9806
8
1
Q9801
D9811
L9804
R9804
D9814
R9817
R9822
R9818
C9801
R9821
D9813
R9840
TP9805
L9801
C9802
R9841
TP9809
R9852
TP9811
TP9807
D9812
D9807
D9816
D9815
D9808
LSJB3241

SD/HDMI P.C.B. LSEP3241A
PT-50LCZ70/PT-56LCZ70/PT-61LCZ70/PT-50LCZ7/PT-56LCZ7
/PT-61LCZ7/PT-50LCZ70-K/PT-56LCZ70-K/PT61LCZ70-K

13.3. REAR JACK P.C.B.

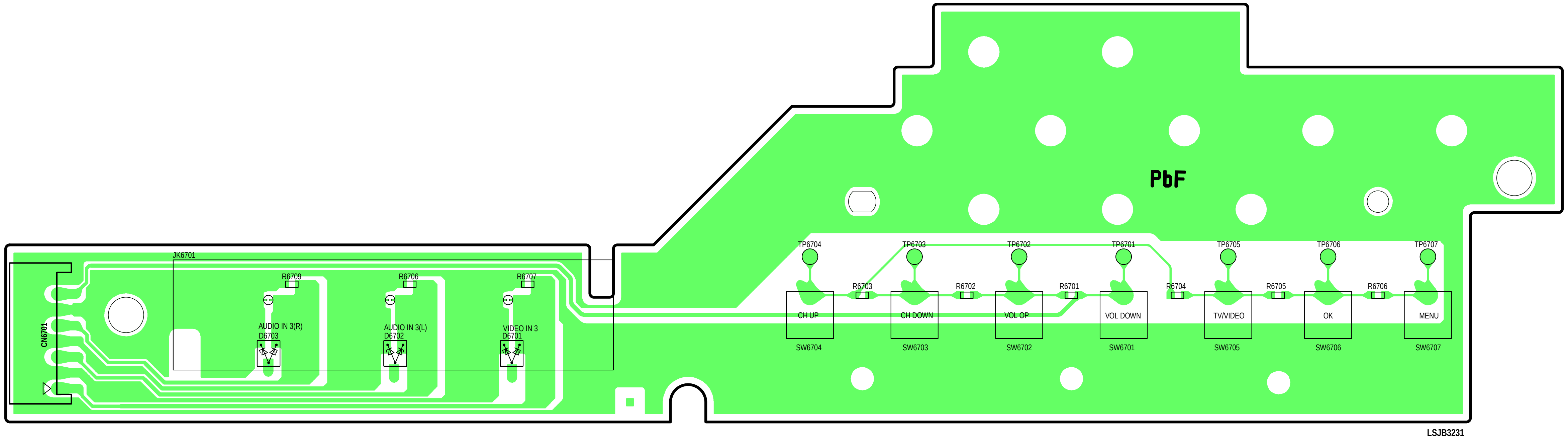
REAR JACK P.C.B. LSEP3230A


PbF
CN3501
IC4101
IC2751
IC2753
IC2754
IC2756
CN2751
CN2752
CN2753
CN2754
CN2755
CN2756
CN2757
CN3502
JK3501
JK3502
JK3503
JK3504
JK3505
JK3506
JK3507
JK3509
S-VHS IN 1
VIDEO IN 1
VIDEO IN 2
VIDEO OUT
AUDIO OUT(L)
AUDIO OUT(R)
AUDIO IN 1(L)
AUDIO IN 1(R)
AUDIO IN 2(L)
AUDIO IN 2(R)
COMPONENT -Y1
COMPONENT -PB1
COMPONENT -PR1
COMPONENT -Y2
COMPONENT -PB2
COMPONENT -PR2
COMPONENT AUDIO IN1(L)
COMPONENT AUDIO IN1(R)
COMPONENT AUDIO IN2(L)
COMPONENT AUDIO IN2(R)
DVI AUDIO IN2(L)
DVI AUDIO IN2(R)
LSJB3230

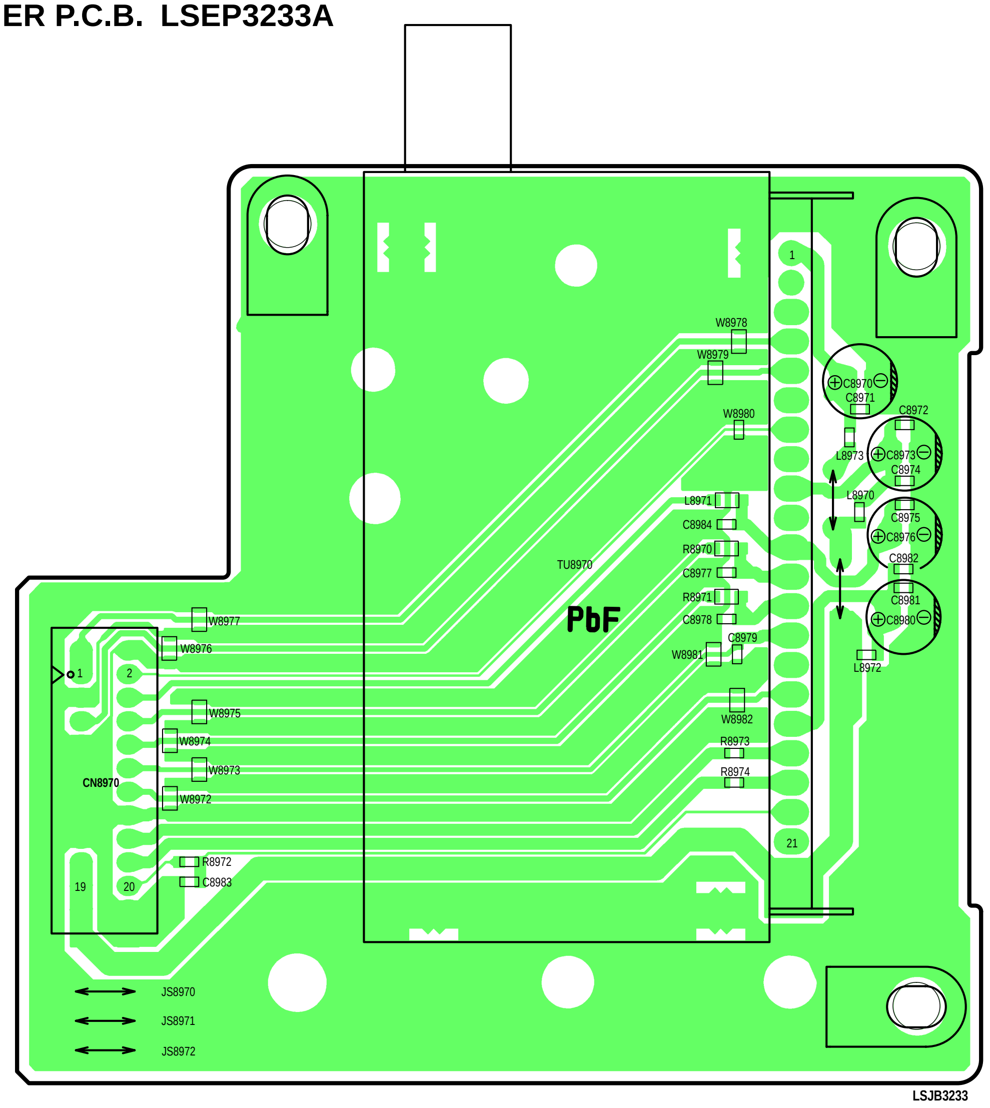
REAR JACK P.C.B. LSEP3230A
PT-50LCZ70/PT-56LCZ70/PT-61LCZ70/PT-50LCZ7/PT-56LCZ7
/PT-61LCZ7/PT-50LCZ70-K/PT-56LCZ70-K/PT61LCZ70-K

13.4. FRONT JACK/OPERATION P.C.B. / TUNER P.C.B. / POWER SWITCH/OPERATION P.C.B.

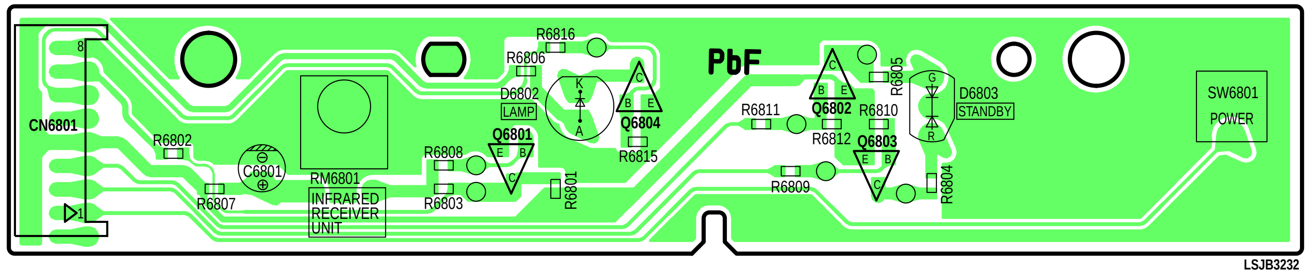
FRONT JACK/OPERATION P.C.B. LSEP3231A


PbF
JK6701
CN6701
R6709
R6708
R6707
AUDIO IN 3(R)
D6703
AUDIO IN 3(L)
D6702
VIDEO IN 3
D6701
TP6704
TP6703
TP6702
TP6701
TP6705
TP6706
TP6707
R6703
R6702
R6701
R6704
R6705
R6706
CH UP
CH DOWN
VOL UP
VOL DOWN
TV/VIDEO
OK
MENU
SW6704
SW6703
SW6702
SW6701
SW6705
SW6706
SW6707
LSJB3231

TUNER P.C.B. LSEP3233A


PbF
TU8970
CN8970
1
2
19
20
21
W8977
W8976
W8975
W8974
W8973
W8972
R8972
C8983
W8978
W8979
W8980
W8981
W8982
R8973
R8974
C8970
C8971
C8972
C8973
C8974
C8975
C8976
C8977
C8978
C8979
C8980
C8981
C8982
C8984
L8970
L8971
L8972
L8973
R8970
R8971
JS8970
JS8971
JS8972
LSJB3233

POWER SWITCH/OPERATION P.C.B. LSEP3232A


PbF
CN6801
8
1
R6802
R6807
C6801
RM6801
INFRARED
RECEIVER
UNIT
R6816
R6806
D6802
LAMP
Q6801
R6808
R6803
R6801
Q6804
R6815
R6811
Q6802
R6810
R6812
Q6803
R6809
R6805
R6804
D6803
STANDBY
SW6801
POWER
LSJB3232

FRONT JACK/OPERATION P.C.B. LSEP3231A
TUNER P.C.B. LSEP3233A
POWER SWITCH/OPERATION P.C.B. LSEP3232A
PT-50LCZ70/PT-56LCZ70/PT-61LCZ70/PT-50LCZ7/PT-56LCZ7
/PT-61LCZ7/PT-50LCZ70-K/PT-56LCZ70-K/PT61LCZ70-K

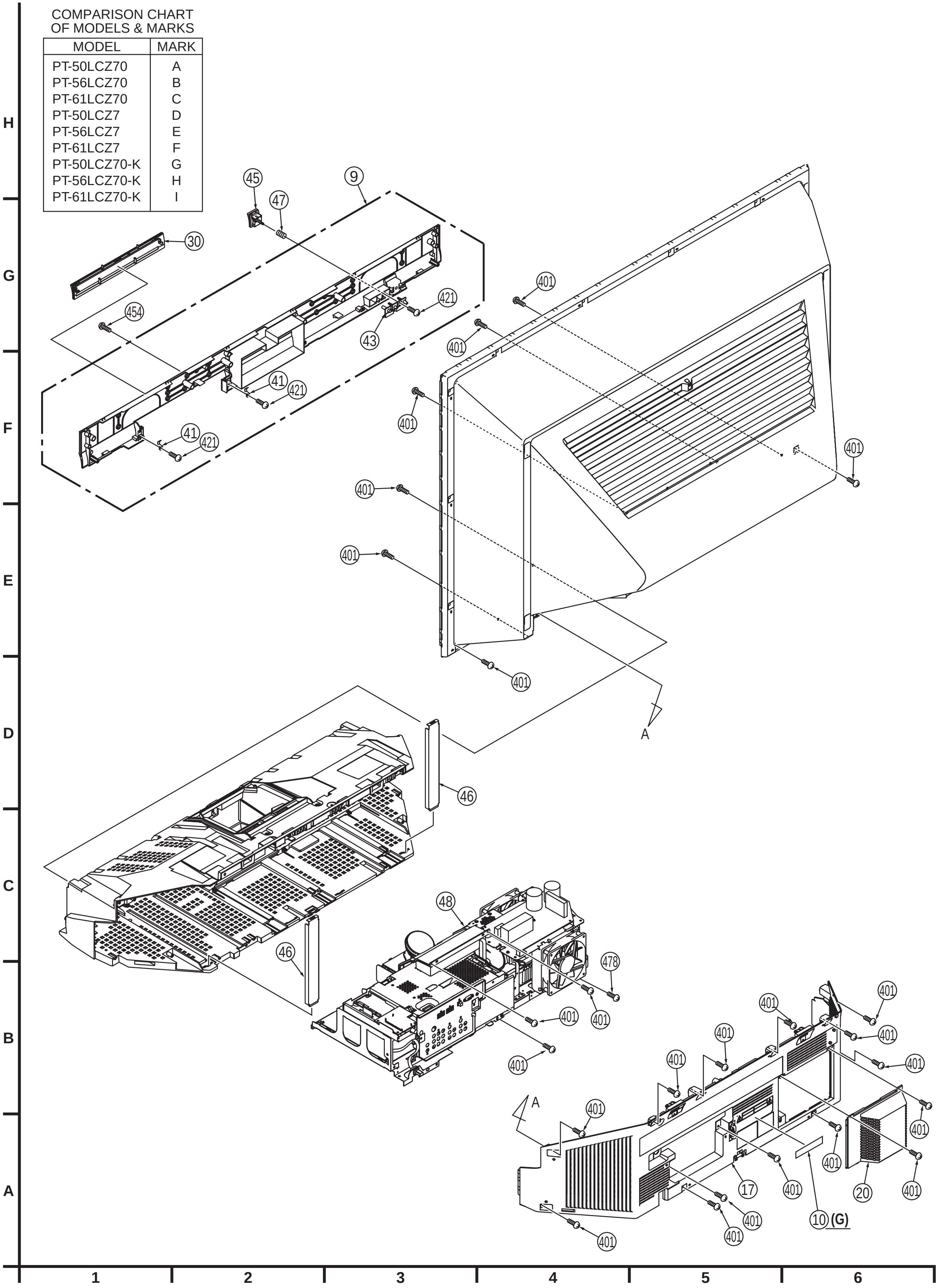
14 Exploded Views

14.1. MAIN PARTS SECTION

❶ 50 INCH MAIN PARTS SECTION (Models: A, D, G)

COMPARISON CHART OF MODELS & MARKS

MODEL	MARK
PT-50LCZ70	A
PT-56LCZ70	B
PT-61LCZ70	C
PT-50LCZ7	D
PT-56LCZ7	E
PT-61LCZ7	F
PT-50LCZ70-K	G
PT-56LCZ70-K	H
PT-61LCZ70-K	I

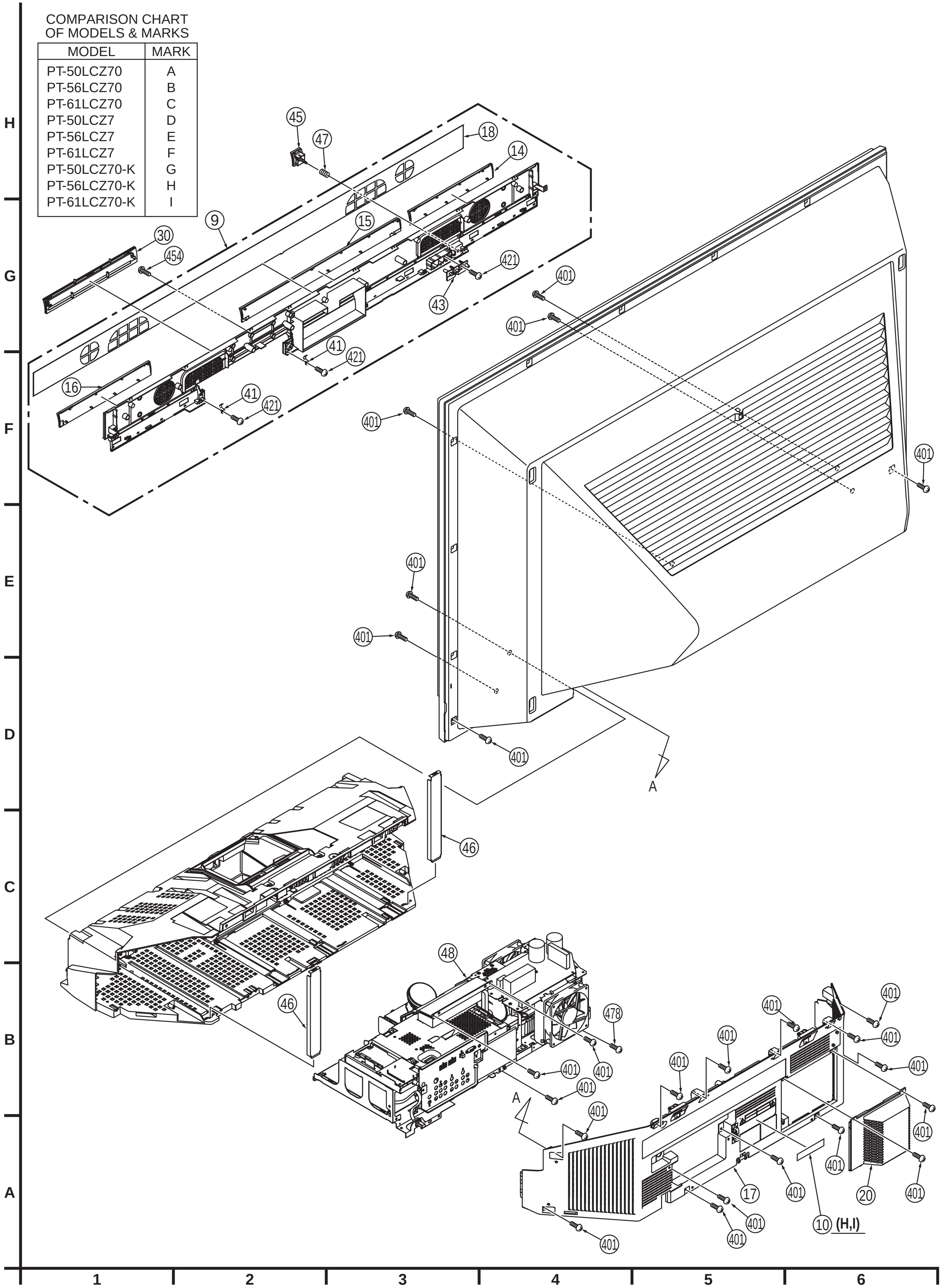


H
G
F
E
D
C
B
A
1
2
3
4
5
6
45
9
47
30
401
421
454
43
401
41
421
401
41
421
401
401
401
401
401
A
46
48
46
478
401
401
401
401
401
401
401
401
401
401
A
401
401
401
17
401
20
401
401
10 (G)
401
401

❶ 56/61 INCH MAIN PARTS SECTION (Models: B, C, E, F, H, I)

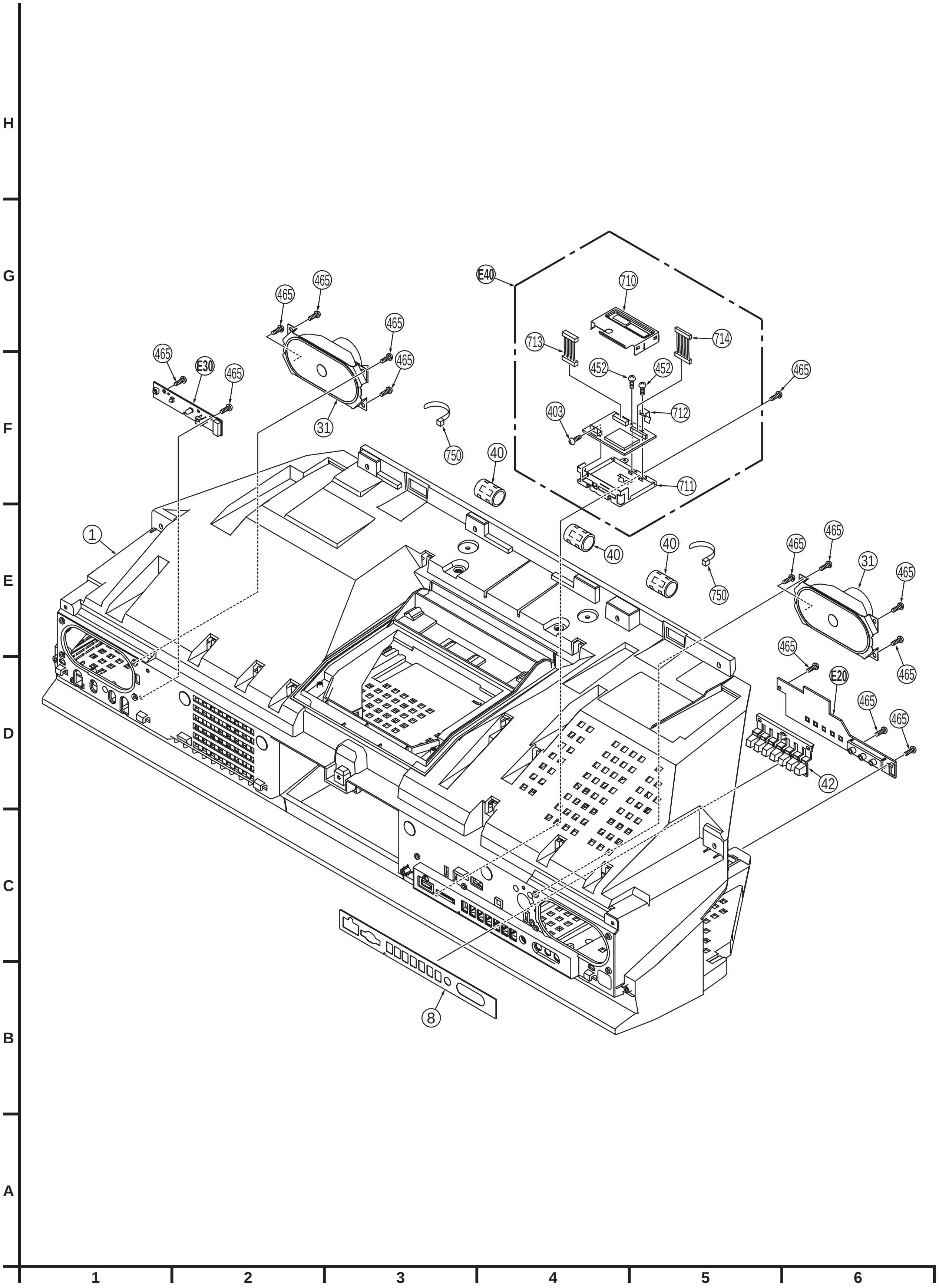
COMPARISON CHART
OF MODELS & MARKS

MODEL	MARK
PT-50LCZ70	A
PT-56LCZ70	B
PT-61LCZ70	C
PT-50LCZ7	D
PT-56LCZ7	E
PT-61LCZ7	F
PT-50LCZ70-K	G
PT-56LCZ70-K	H
PT-61LCZ70-K	I


H
G
F
E
D
C
B
A
1
2
3
4
5
6
45
47
18
14
9
15
30
454
421
43
401
401
41
421
16
41
421
401
401
401
401
401
401
A
46
46
48
478
401
401
401
401
401
401
401
401
401
401
401
A
401
401
401
17
401
401
401
10 (H,I)
20
401

14.2. BASE BODY SECTION

❷ BASE BODY SECTION

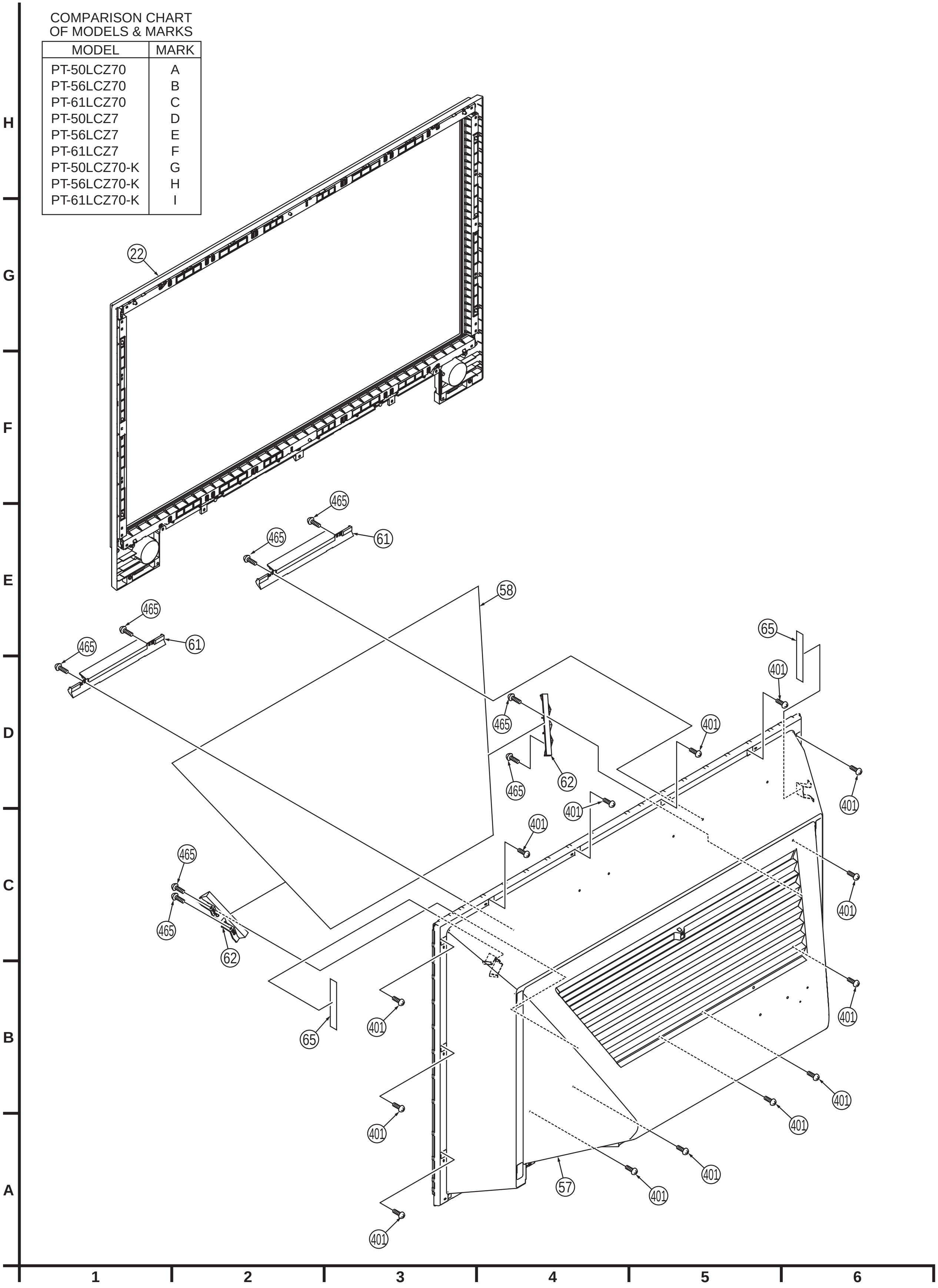

H
G
F
E
D
C
B
A
1
2
3
4
5
6
E40
710
713
714
452
452
465
403
712
711
465
465
465
465
465
E30
465
31
750
40
1
40
40
750
465
465
31
465
465
465
E20
465
465
42
8

14.3. DISPLAY SECTION

❸ 50 INCH DISPLAY SECTION (Models: A, D, G)

COMPARISON CHART OF MODELS & MARKS

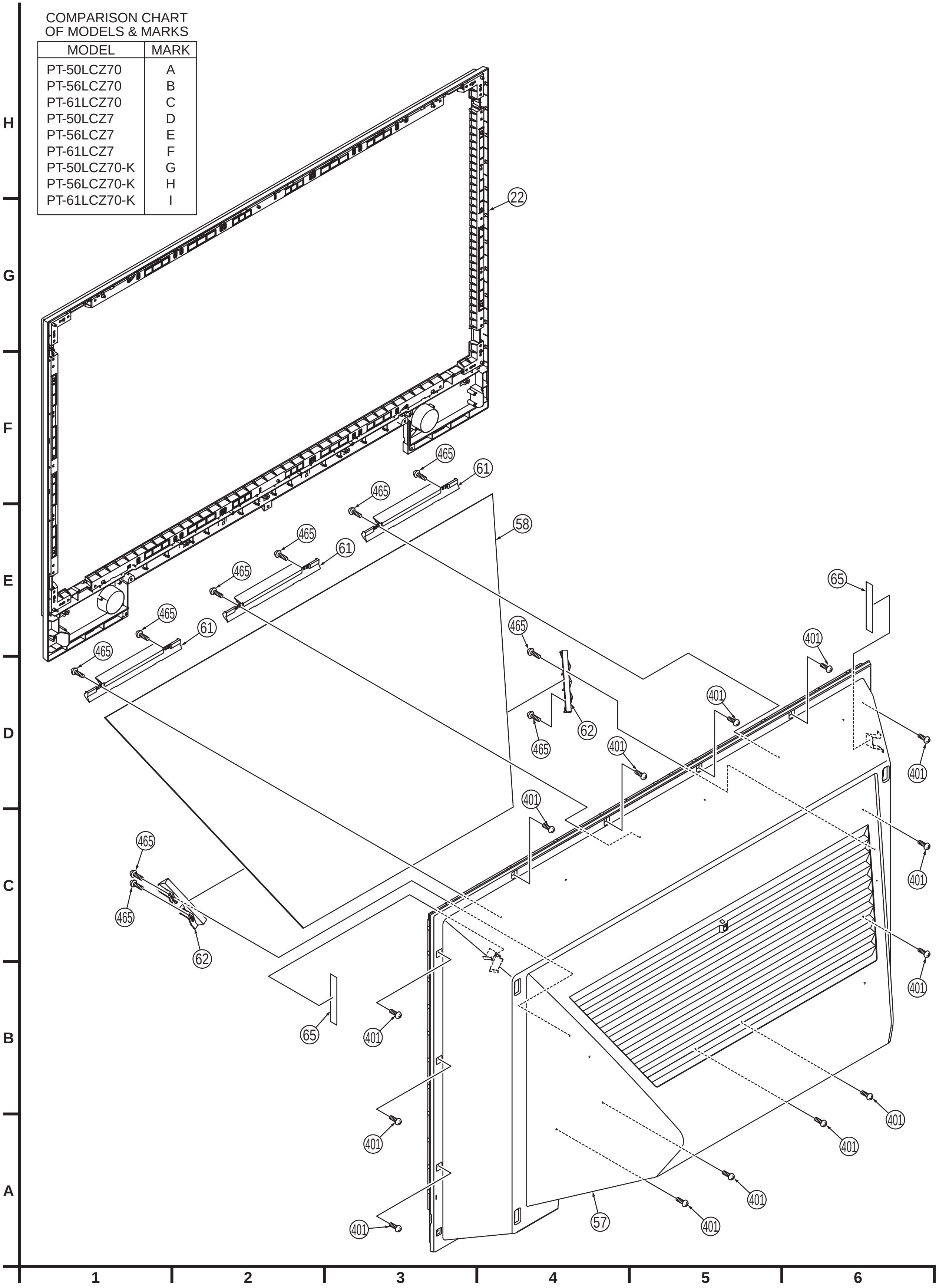
MODEL	MARK
PT-50LCZ70	A
PT-56LCZ70	B
PT-61LCZ70	C
PT-50LCZ7	D
PT-56LCZ7	E
PT-61LCZ7	F
PT-50LCZ70-K	G
PT-56LCZ70-K	H
PT-61LCZ70-K	I


H
G
F
E
D
C
B
A
1
2
3
4
5
6
22
465
61
58
65
401
62
57

❸ 56/61 INCH DISPLAY SECTION (Models: B, C, E, F, H, I)

COMPARISON CHART
OF MODELS & MARKS

MODEL	MARK
PT-50LCZ70	A
PT-56LCZ70	B
PT-61LCZ70	C
PT-50LCZ7	D
PT-56LCZ7	E
PT-61LCZ7	F
PT-50LCZ70-K	G
PT-56LCZ70-K	H
PT-61LCZ70-K	I



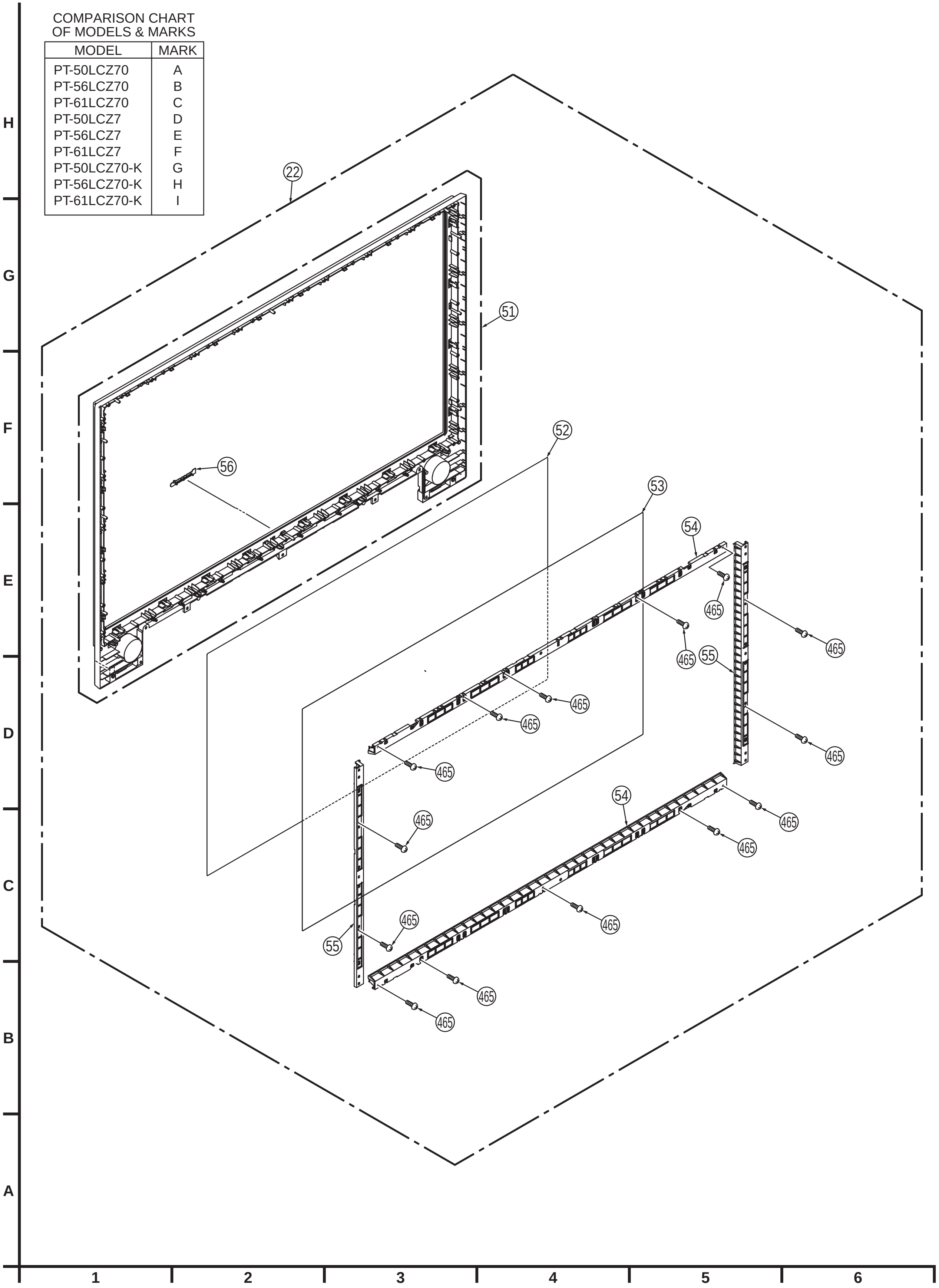
H
G
F
E
D
C
B
A
1
2
3
4
5
6
22
465
61
58
65
401
62
57

14.4. SCREEN SECTION

❹ 50 INCH SCREEN SECTION (Models: A, D, G)

COMPARISON CHART
OF MODELS & MARKS

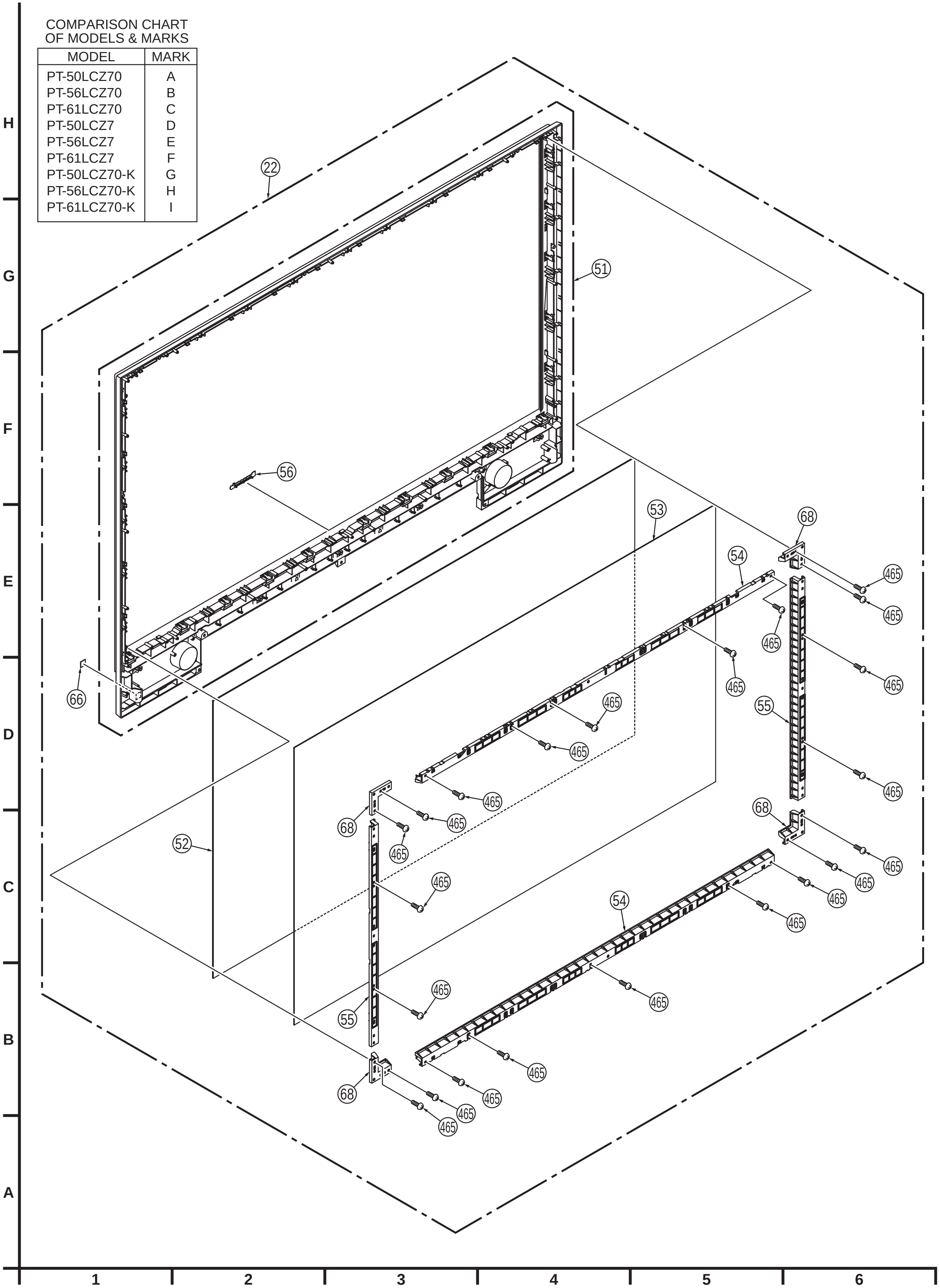
MODEL	MARK
PT-50LCZ70	A
PT-56LCZ70	B
PT-61LCZ70	C
PT-50LCZ7	D
PT-56LCZ7	E
PT-61LCZ7	F
PT-50LCZ70-K	G
PT-56LCZ70-K	H
PT-61LCZ70-K	I


H
G
F
E
D
C
B
A
1
2
3
4
5
6
22
51
56
52
53
54
55
465
54
55
465

❹ 56/61 INCH SCREEN SECTION (Models: B, C, E, F, H, I)

COMPARISON CHART
OF MODELS & MARKS

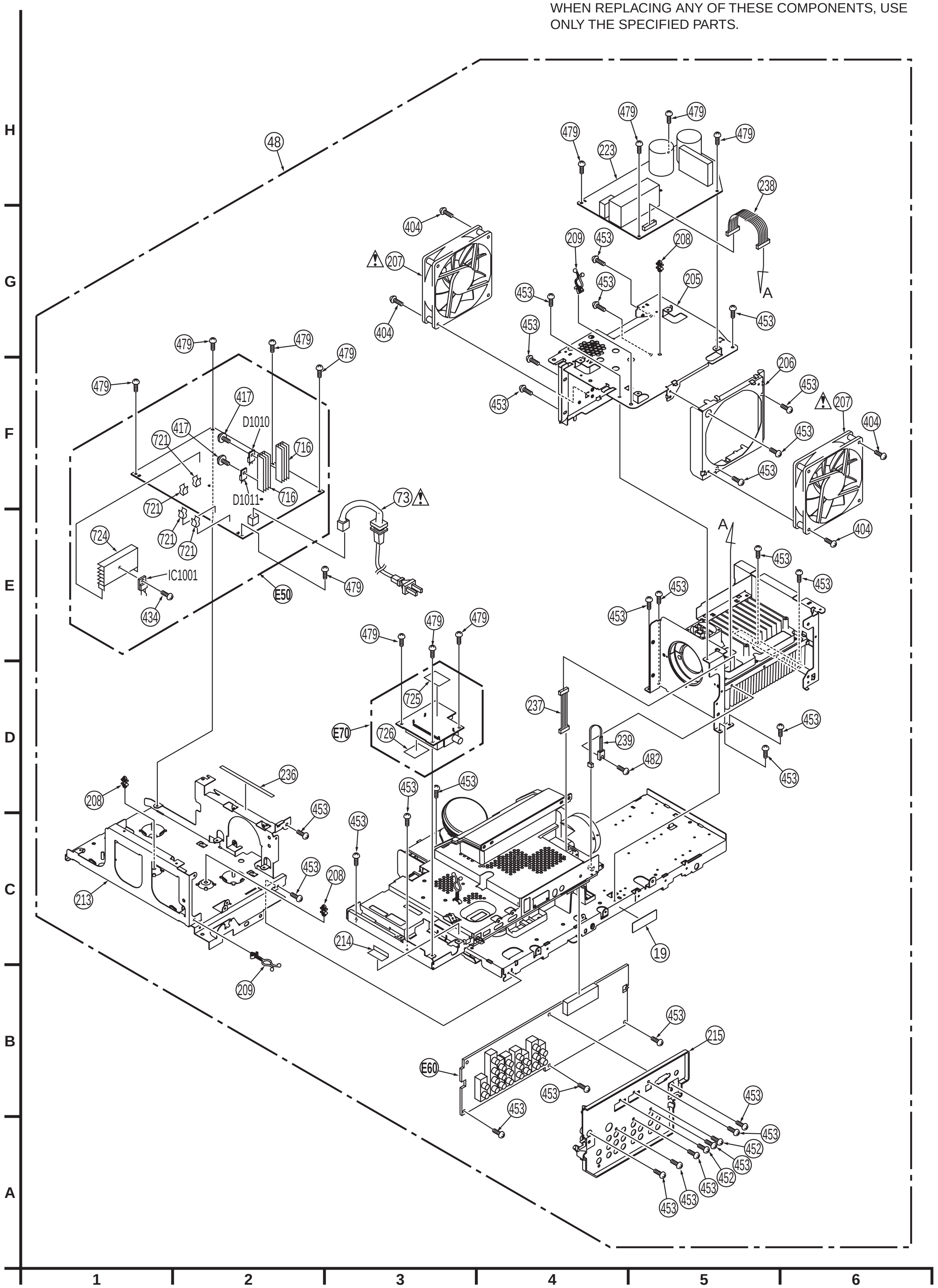
MODEL	MARK
PT-50LCZ70	A
PT-56LCZ70	B
PT-61LCZ70	C
PT-50LCZ7	D
PT-56LCZ7	E
PT-61LCZ7	F
PT-50LCZ70-K	G
PT-56LCZ70-K	H
PT-61LCZ70-K	I


H
G
F
E
D
C
B
A
1
2
3
4
5
6
22
51
56
53
68
54
465
465
465
465
465
465
66
55
465
465
465
52
68
465
465
465
68
465
465
465
54
465
465
465
465
55
465
465
68
465
465
465

14.5. OPT/TV UNIT SECTION

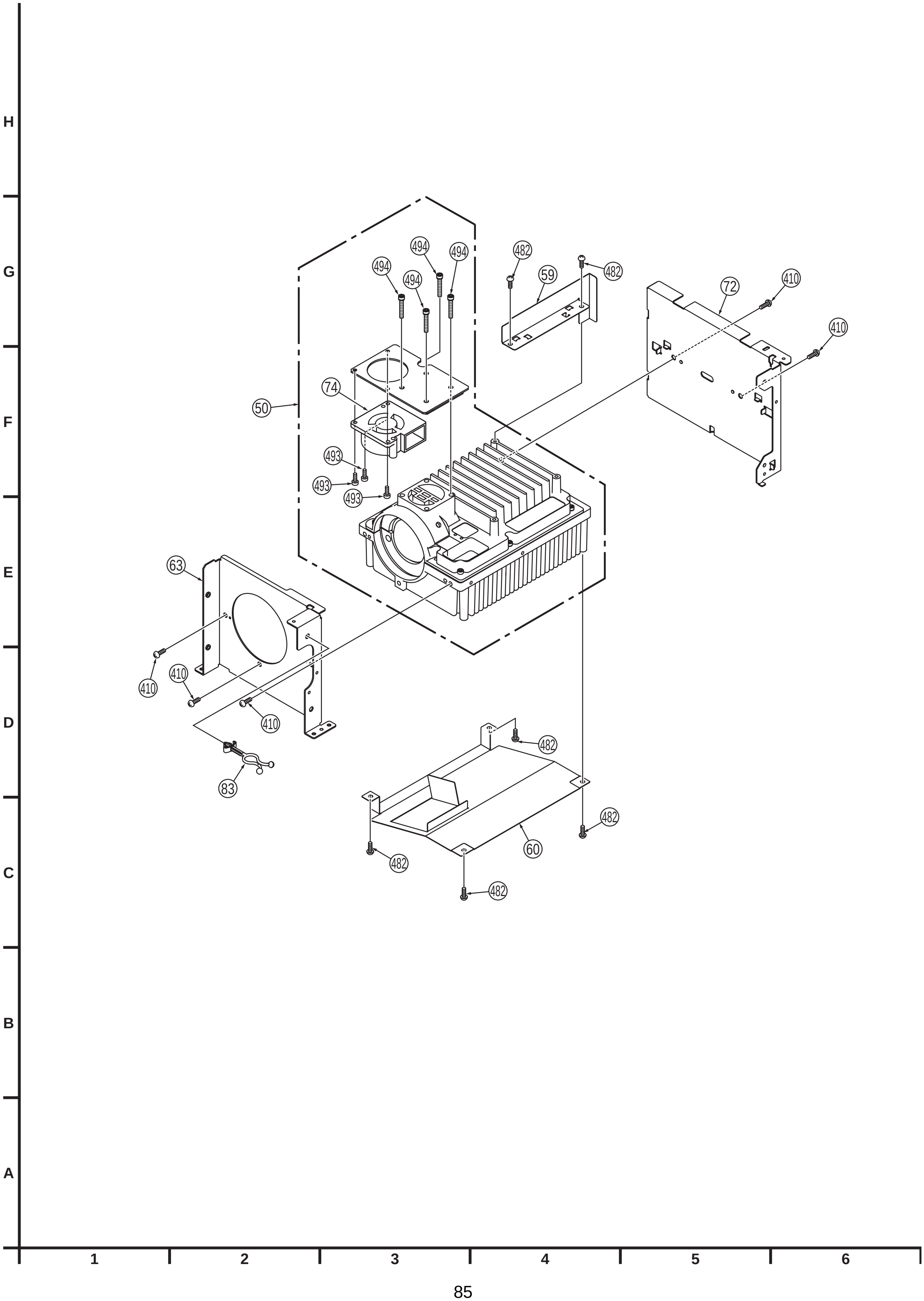
❺ OPT/TV UNIT SECTION

IMPORTANT SAFETY NOTICE
COMPONENTS IDENTIFIED BY THE SIGN ⚠ HAVE SPECIAL CHARACTERISTICS IMPORTANT FOR SAFETY. WHEN REPLACING ANY OF THESE COMPONENTS, USE ONLY THE SPECIFIED PARTS.


H
G
F
E
D
C
B
A
1
2
3
4
5
6
48
479
223
238
404
209
453
208
205
A
⚠ 207
453
404
479
417
D1010
716
721
D1011
73 ⚠
724
IC1001
434
E50
206
453
⚠ 207
404
A
237
239
482
725
E70
726
236
208
213
214
19
209
E60
215
452

14.6. LAMP UNIT SECTION

❻ LAMP UNIT SECTION

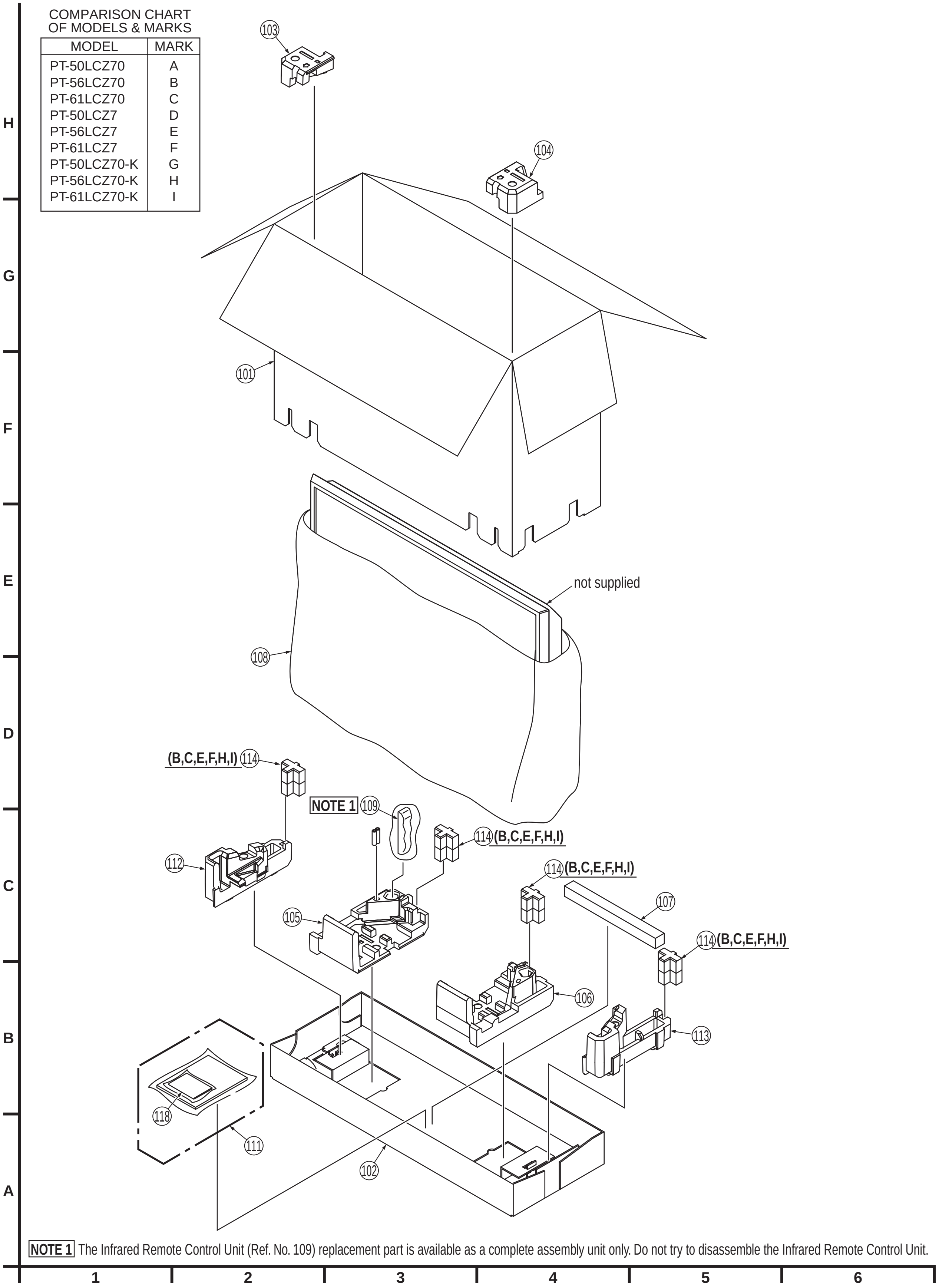

H
G
F
E
D
C
B
A
494
494
494
494
482
59
482
72
410
410
74
50
493
493
493
63
410
410
410
410
83
482
482
60
482
482
1
2
3
4
5
6

14.7. PACKING PARTS AND ACCESSORIES SECTION

⑦ PACKING PARTS AND ACCESSORIES SECTION

COMPARISON CHART
OF MODELS & MARKS

MODEL	MARK
PT-50LCZ70	A
PT-56LCZ70	B
PT-61LCZ70	C
PT-50LCZ7	D
PT-56LCZ7	E
PT-61LCZ7	F
PT-50LCZ70-K	G
PT-56LCZ70-K	H
PT-61LCZ70-K	I


H
G
F
E
D
C
B
A
1
2
3
4
5
6
103
104
101
not supplied
108
(B,C,E,F,H,I) 114
NOTE 1 109
114 (B,C,E,F,H,I)
112
114 (B,C,E,F,H,I)
107
105
114 (B,C,E,F,H,I)
106
113
118
111
102

NOTE 1 The Infrared Remote Control Unit (Ref. No. 109) replacement part is available as a complete assembly unit only. Do not try to disassemble the Infrared Remote Control Unit.

15 Replacement Parts List

BEFORE REPLACING PARTS, READ THE FOLLOWING:

15.1. REPLACEMENT NOTES

15.1.1. General Notes

1. Use only original replacement parts:

   To maintain original function and reliability of repaired units, use only original replacement parts which are listed with their part numbers in the parts list.
2. **IMPORTANT SAFETY NOTICE**

   Components identified by the sign ⚠ have special characteristics important for safety. When replacing any of these components, use only the specified parts.
3. SPECIAL NOTE

   All integrated circuits and many other semiconductor devices are electrostatically sensitive and therefore require the special handling techniques described under the "ELECTROSTATICALLY SENSITIVE (ES) DEVICES" section of this service manual.
4. Parts with no Ref. No. in "EXPLODED VIEWS" are not supplied. And some Ref. No. will be skipped. Be sure to make your orders of replacement parts according to the parts list.
5. Parts different in shape or size may be used. However, only interchangeable parts will be supplied as service replacement parts.
6. Definition of Parts supplier:
   a. Parts with mark "PSEC" in the Remarks column are supplied from PSEC.
   b. Parts without mark in the Remarks column are supplied from PASC-NPC.
7. Item numbers with capital letter E (Example: E10, E20,...) in the Ref. No. column are shown in the exploded views.
8. Parts whose Ref. Nos. are the same are interchangeable as replacement parts. Any of these parts may be ordered and used as a replacement part.

15.1.2. Mechanical Replacement Notes

1. Section No. of parts shown in Exploded Views are indicated in the Remarks column.
2. Abbreviation

   RTL: Retention Time Limited

   This indicates that the retention time is limited for this item. After the discontinuation of this item in production, it will no longer be available.
3. After replacing the OPT/TV Unit, be sure to perform "ADJUSTMENT of the OPT/TV Unit." Refer to "WHEN INSTALLING THE OPT/TV UNIT INTO THE UNIT AT THE USER´S LOCATION"; in Adjustment Procedures 1.
4. The Infrared Remote Control Unit (Ref. No. 109) replacement part is available as a complete assembly unit only. Do not try to disassemble the Infrared Remote Control Unit.

15.1.3. Electrical Replacement Notes

1. Unless otherwise specified;

   All resistors are in Ω, K = 1,000 Ω, M = 1,000 kΩ.
2. Abbreviation

RTL:	Retention Time Limited This indicates that the retention time is limited for this item. After the discontinuation of this item in production, it will no longer be available.
NR:	Non Repairable Board Ass´y
MGF CHIP:	Metal Glaze Film Chip
C CHIP:	Ceramic Chip
COMPLX CMP:	Complex Component
W FLMPRF:	Wirewound Flameproof
C.B.A.:	Circuit Board Assembly
P.C.B.:	Printed Circuit Board
E.S.D.:	Electrostatically Sensitive Devices

3. When replacing 0 Ω resistor, a wire can be substituted for it.

COMPARISON CHART OF MODELS & MARKS

MODEL	MARK
PT-50LCZ70	A
PT-56LCZ70	B
PT-61LCZ70	C
PT-50LCZ7	D
PT-56LCZ7	E
PT-61LCZ7	F
PT-50LCZ70-K	G
PT-56LCZ70-K	H
PT-61LCZ70-K	I

15.2. MECHANICAL REPLACEMENT PARTS LIST

COMPARISON CHART OF MODELS & MARKS

MODEL	MARK
PT-50LCZ70	A
PT-56LCZ70	B
PT-61LCZ70	C
PT-50LCZ7	D
PT-56LCZ7	E
PT-61LCZ7	F
PT-50LCZ70-K	G
PT-56LCZ70-K	H
PT-61LCZ70-K	I

Definition of Parts supplier:

1. **Parts with mark "PSEC" in the Remarks column are supplied from PSEC.**
2. **Parts without mark in the Remarks column are supplied from PASC-NPC.**

MECHANICAL REPLACEMENT PARTS

Ref. No.	Part No.	Part Name & Description	Remarks
1	LSKU0053	BASE BODY	2
8	LSGH0082	FRONT JACK SHEET	2
9	LSYF0614	FRONT COVER UNIT (A,D,G)	1
9	LSYF0615	FRONT COVER UNIT (B,E,H)	1
9	LSYF0616	FRONT COVER UNIT (C,F,I)	1
10	TKK778377-1	CAUTION PANEL (G,H,I)	1
14	LSKW0263	ORNAMENT L (B,E,H)	1
14	LSKW0265	ORNAMENT L (C,F,I)	1
15	LSKW0269	ORNAMENT CENTER (B,C,E,F,H,I)	1
16	LSKW0272	ORNAMENT R (B,E,H)	1
16	LSKW0273	ORNAMENT R (C,F,I)	1
17	LSGV0141	REAR COVER	1
18	LSKG0112	SP PUNCHING SHEET (B,E,H)	1
18	LSKG0113	SP PUNCHING SHEET (C,F,I)	1
19	LSQL2324	FUSE LABEL	5
20	LSGQ0243	REAR FAN DUCT	1
22	LSYK2129	SCREEN UNIT (A,G)	3,4
22	LSYK2130	SCREEN UNIT (B,H)	3,4
22	LSYK2131	SCREEN UNIT (C,I)	3,4
22	LSYK2187	SCREEN UNIT (D)	3,4
22	LSYK2188	SCREEN UNIT (E)	3,4
22	LSYK2189	SCREEN UNIT (F)	3,4
30	LSKF0688	FRONT DOOR (A,D,G)	1
30	LSYF0618	FRONT DOOR (B,C,E,F,H,I)	1
31	EAS12D182A	SPEAKER	2
40	J0KG00000011	FILTER FOR EMI / EMC (CORES)	2
41	LSMC0160	PANEL SPRING	1
42	LSGU0735	OPERATION BUTTON	2
43	LSGL1517	POWER LED/IR PIECE (A,D,G)	1
43	LSGL1516	POWER LED/IR PIECE (B,C,E,F,H,I)	1
45	LSGU0733	POWER BUTTON (A,D,G)	1
45	LSYF0619	POWER BUTTON (B,C,E,F,H,I)	1
46	LSMA1010	SUPPORT SHIELD	1
47	LSMB0321	POWER BUTTON SPRING	1
48	LSXA0871-HB	OPT/TV UNIT (A,B,D,E,G,H)	1,5 PSEC
48	LSXA0872-HB	OPT/TV UNIT (C,F,I)	1,5 PSEC
50	LFS4000PA1	LAMP UNIT	6 PSEC
51	LSYK2135	ESCUTCHEON SUB UNIT (A,G)	4
51	LSYK2136	ESCUTCHEON SUB UNIT (B,H)	4
51	LSYK2137	ESCUTCHEON SUB UNIT (C,I)	4
51	LSYK2190	ESCUTCHEON SUB UNIT (D)	4
51	LSYK2191	ESCUTCHEON SUB UNIT (E)	4
51	LSYK2192	ESCUTCHEON SUB UNIT (F)	4
52	LSGP0589	LENTICULAR SCREEN (A,D,G)	4
52	LSGP0560	LENTICULAR SCREEN (B,E,H)	4
52	LSGP0562	LENTICULAR SCREEN (C,F,I)	4
53	LSGP0588	FRESNEL LENS (A,D,G)	4
53	LSGP0559	FRESNEL LENS (B,E,H)	4
53	LSGP0561	FRESNEL LENS (C,F,I)	4
54	LSXA0886	SCREEN SUPPORT H UNIT	4
55	LSXA0945	SCREEN SUPPORT V UNIT (A,D,G)	4
55	LSXA0887	SCREEN SUPPORT V UNIT (B,C,E,F,H,I)	4
56	TBMA220	PANASONIC BADGE	4
57	LSGV0137	BACK COVER (A,D,G)	3
57	LSGV0139	BACK COVER (B,E,H)	3
57	LSGV0140	BACK COVER (C,F,I)	3
58	LSDL0411	MIRROR (A,D,G)	3
58	LSDL0311	MIRROR (B,E,H)	3
58	LSDL0312	MIRROR (C,F,I)	3
59	LSMA1011	LAMP BRACKET TOP	6
60	LSMA1017	LAMP BRACKET UNDER	6
61	LSYF0602	MIRROR HOLDER H UNIT (A,D,G)	3
61	LSYF0602	MIRROR HOLDER H UNIT (B,C,E,F,H,I)	3
62	LSYF0603	MIRROR HOLDER V UNIT	3
63	LSMA0991	RFP STAY PLATE	6
65	LSMF0499	SPACER (A,B,D,E,G,H)	3
65	LSMF0500	SPACER (C,F,I)	3
66	LSQL2173	LABEL (B,C,E,F,H,I)	4
68	LSMA1005	SCREEN SUPPORT CORNER (B,C,E,F,H,I)	4
72	LSMA1006	LAMP SUPPORT SHIELD	6
73	LSJA0641	AC CORD	5 ⚠
74	LSRF0016	BLOWER	6
83	TMM5439-1	CLAMPER	6 PSEC
101	LSPG2449	CARTON BOX (A,G)	7
101	LSPG2450	CARTON BOX (B,H)	7
101	LSPG2451	CARTON BOX (C,I)	7
101	LSPG2496	CARTON BOX (D)	7
101	LSPG2497	CARTON BOX (E)	7
101	LSPG2498	CARTON BOX (F)	7
102	LSPG2443	CARTON BOX BOTTOM (A,D,G)	7
102	LSPG2445	CARTON BOX BOTTOM (B,E,H)	7
102	LSPG2447	CARTON BOX BOTTOM (C,F,I)	7
103	LSPN0803	CUSHION TOP L	7
104	LSPN0804	CUSHION TOP R	7
105	LSPN0805	CUSHION BOTTOM L	7
106	LSPN0806	CUSHION BOTTOM R	7
107	LSPN0831	CUSHION BOTTOM CENTER	7
108	LSPF0111	BAG,POLYETHYLENE (A,B,C,E,F,G,H,I)	7
108	LSPF0161	BAG,POLYETHYLENE (D)	7
109	N2QAYB000100	REMOTE CONTROL UNIT	7
111	LSQF1254	FAN BAG UNIT (A,B,C,D,E,F)	7
111	LSQF1255	FAN BAG UNIT (G,H,I)	7
112	LSPN0807	CUSHION SIDE L	7
113	LSPN0808	CUSHION SIDE R	7
114	LSPN0809	CUSHION BACK (B,E,H)	7
114	LSPN0810	CUSHION BACK (C,F,I)	7
118	LSFQ0003	CLEANING CLOTH	7
205	LSSC0963	LAMP SHIELD CASE FRONT	5
206	LSSC0992-1	FAN SHIELD REAR	5
207	L6FAYYYH0053	DC FAN MOTORS	5 ⚠
208	KGLS-6S	CLAMPER	5
209	LSGQ0176	CLAMPER	5
213	LSMA1009	POWER P.C.B. SHIELD	5
214	LSMZ0426	BARRIER	5

Ref. No.	Part No.	Part Name & Description	Remarks
215	LSJH0096	REAR JACK HOLDER	5
223	LSXK0303	RF AMP POWER SUPPLY P.C.B.NR	5 PSEC
236	LSMF0367	SHEET,NYLON-RAYON	5
237	LSJA0635	RF AMP-MAIN HARNESS	5
238	LSJA0636	RF AMP-RF POWER HARNESS	5
239	LSJA0639	THERMAL FUSE	5
401	XTV4+16AFJ	TAPPING SCREW,STEEL	1,3
403	XTV3+8FFJK	TAPPING SCREW,STEEL	2
404	XTV3+30JFJ	TAPPING SCREW,STEEL	5
410	XYN4+J8FJ	SCREW W/WASHER,STEEL	6 PSEC
417	XYN3+K10FN	SCREW W/WASHER,STEEL	5
421	XTV3+8GFJ	TAPPING SCREW,STEEL	1
434	XYN3+F10FJ	SCREW W/WASHER,STEEL	5
452	XTV3+8FFJ	TAPPING SCREW,STEEL	2,5
453	XTV3+10JFJ	TAPPING SCREW,STEEL	5
454	XTV4+16AFJK	TAPPING SCREW,STEEL	1
465	XTV4+12AFJ	TAPPING SCREW,STEEL (A,D,G)	2,3,4
465	XTV4+12AFJ	TAPPING SCREW,STEEL (B,C,E,F,H,I)	2,3,4
478	LSHD0099-FJ	SCREW,STEEL	1
479	XYE3+FJ8FJ	SCREW W/WASHER,STEEL	5
482	XYN3+J8FJ	SCREW W/WASHER,STEEL	5,6 PSEC
493	XWA3BFN	SPRING WASHER	6
494	XVE3B20FN	SCREW W/WASHER,STEEL	6
710	LSMP0559-1	SD SHIELD CASE	2
711	LSMP0558	SD SUPPORT ANGLE	2
712	LSMC0161	SD EARTH SPRING	2
713	K1PY30Y00005	HDMI INTERNAL HARNESS	2
714	LSJA0629	SD-MAIN HARNESS	2
716	LSSC0978	HEAT SINK	5
721	EYF52BCY	FUSE HOLDER	5
724	LSSC0766	HEAT SINK	5
725	LSSC0996	ELECTROMAGNETIC WAVE ABSORPTION SHEET	5
726	LSSC0997	ELECTROMAGNETIC WAVE ABSORPTION SHEET	5
750	VZFS0006	CLAMPER	2
E20	LSEP3231A	FRONT JACK/OPERATION P.C.B.	2 RTL
E30	LSEP3232A	POWER SWITCH/OPERATION P.C.B.	2 RTL
E40	LSXA0915	SD/HDMI P.C.B.	2 RTL
E50	LSEP3237B	POWER P.C.B.	5 RTL
E60	LSEP3230A	REAR JACK P.C.B.	5 RTL
E70	LSEP3233A	TUNER P.C.B.	5 RTL

15.3. ELECTRICAL REPLACEMENT PARTS LIST

Definition of Parts supplier:

1. **All parts are supplied from PASE-NPC.**

PRINTED CIRCUIT BOARD ASSEMBLY

Ref. No.	Part No.	Part Name & Description	Remarks
E20	LSEP3231A	FRONT JACK/OPERATION P.C.B.	RTL
E30	LSEP3232A	POWER SWITCH/OPERATION P.C.B.	RTL
E40	LSXA0915	SD/HDMI P.C.B.	E.S.D. RTL
E50	LSEP3237B	POWER P.C.B.	RTL
E60	LSEP3230A	REAR JACK P.C.B.	RTL
E70	LSEP3233A	TUNER P.C.B.	RTL

15.3.1. FRONT JACK/OPERATION P.C.B.

RESISTORS

Ref. No.	Part No.	Part Name & Description	Remarks
R6701	ERJ3EKF1741V	MGF CHIP 1/16W 1.74K	
R6702	ERJ3EKF1621V	MGF CHIP 1/16W 1.62K	
R6703	ERJ3EKF2321V	MGF CHIP 1/16W 2.32K	
R6704	ERJ3EKF3161V	MGF CHIP 1/16W 3.16K	
R6707	ERJ3GEYJ750V	MGF CHIP 1/16W 75	
R6708	ERJ3GEYJ184V	MGF CHIP 1/16W 180K	
R6709	ERJ3GEYJ184V	MGF CHIP 1/16W 180K	

PIN HEADER

Ref. No.	Part No.	Part Name & Description	Remarks
CN6701	K1KA08BA0061	CONNECTOR 8P	

SWITCHES

Ref. No.	Part No.	Part Name & Description	Remarks
SW6701	EVQ11G05R	SWITCH PUSH	
SW6702	EVQ11G05R	SWITCH PUSH	
SW6703	EVQ11G05R	SWITCH PUSH	
SW6704	EVQ11G05R	SWITCH PUSH	
SW6705	EVQ11G05R	SWITCH PUSH	

JACK

Ref. No.	Part No.	Part Name & Description	Remarks
JK6701	K2HA306A0037	JACKS FOR SMALL SIGNAL (EQUIPMENT SIDE)	

15.3.2. POWER SWITCH/OPERATION P.C.B.

TRANSISTORS

Ref. No.	Part No.	Part Name & Description	Remarks
Q6801	2SD0601A0L	TRANSISTOR SI NPN CHIP	
or Q6801	B1ABCF000011	TRANSISTOR SI NPN CHIP	
or Q6801	B1ABCF000106	TRANSISTOR SI NPN CHIP	
Q6802	2SB1218A0L	TRANSISTOR SI PNP CHIP	
or Q6802	B1ADCF000063	TRANSISTOR SI PNP CHIP	
or Q6802	B1ADCF000075	TRANSISTOR SI PNP CHIP	
Q6803	2SB1218A0L	TRANSISTOR SI PNP CHIP	
or Q6803	B1ADCF000063	TRANSISTOR SI PNP CHIP	
or Q6803	B1ADCF000075	TRANSISTOR SI PNP CHIP	
Q6804	2SD1819A0L	TRANSISTOR SI NPN CHIP	
or Q6804	B1ABCF000020	TRANSISTOR SI NPN CHIP	
or Q6804	B1ABCF000112	TRANSISTOR SI NPN CHIP	

DIODES

Ref. No.	Part No.	Part Name & Description	Remarks
D6802	B3AAA0000975	LIGHT EMITTING DIODE	
or D6802	B3AAA0000538	LIGHT EMITTING DIODE	
D6803	B3AGA0000072	LIGHT EMITTING DIODE GREEN	

RESISTORS

Ref. No.	Part No.	Part Name & Description	Remarks
R6801	ERJ3GEYJ223V	MGF CHIP 1/16W 22K	
R6802	ERJ3GEYJ101V	MGF CHIP 1/16W 100	
R6804	ERJ3GEYJ181V	MGF CHIP 1/16W 180	
R6805	ERJ3GEYJ101V	MGF CHIP 1/16W 100	
R6806	ERJ3GEYJ471V	MGF CHIP 1/16W 470	
R6807	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R6808	ERJ3GEYJ101V	MGF CHIP 1/16W 100	
R6809	ERJ3GEYJ103V	MGF CHIP 1/16W 10K	
R6810	ERJ3GEYJ103V	MGF CHIP 1/16W 10K	
R6811	ERJ3GEYJ103V	MGF CHIP 1/16W 10K	
R6812	ERJ3GEYJ103V	MGF CHIP 1/16W 10K	
R6815	ERJ3GEYJ103V	MGF CHIP 1/16W 10K	
R6816	ERJ3GEYJ103V	MGF CHIP 1/16W 10K	

CAPACITOR

Ref. No.	Part No.	Part Name & Description	Remarks
C6801	ECEA0JKA470	ELECTROLYTIC 6.3V 47UF	

PIN HEADER

Ref. No.	Part No.	Part Name & Description	Remarks
CN6801	K1KA08BA0061	CONNECTOR 8P	

SWITCH

Ref. No.	Part No.	Part Name & Description	Remarks
SW6801	EVQ11G05R	SWITCH PUSH	

MISCELLANEOUS

Ref. No.	Part No.	Part Name & Description	Remarks
RM6801	B3RAD0000143	INFRARED RECEIVER	

15.3.3. SD/HDMI P.C.B.

INTEGRATED CIRCUITS

Ref. No.	Part No.	Part Name & Description	Remarks
IC9801	C1AB00002641	IC, LINEAR	
IC9802	LSSK0120	IC, EEP ROM	E.S.D.

TRANSISTORS

Ref. No.	Part No.	Part Name & Description	Remarks
Q9801	2SD1819A0L	TRANSISTOR SI NPN CHIP	
or Q9801	B1ABCF000020	TRANSISTOR SI NPN CHIP	
or Q9801	B1ABCF000112	TRANSISTOR SI NPN CHIP	
Q9802	2SD1819A0L	TRANSISTOR SI NPN CHIP	
or Q9802	B1ABCF000020	TRANSISTOR SI NPN CHIP	
or Q9802	B1ABCF000112	TRANSISTOR SI NPN CHIP	
Q9804	2SD1819A0L	TRANSISTOR SI NPN CHIP	
or Q9804	B1ABCF000020	TRANSISTOR SI NPN CHIP	
or Q9804	B1ABCF000112	TRANSISTOR SI NPN CHIP	

DIODES

Ref. No.	Part No.	Part Name & Description	Remarks
D9801	EZAEG2A50AX	OTHER FILTERS	
D9802	EZAEG2A50AX	OTHER FILTERS	
D9803	EZAEG2A50AX	OTHER FILTERS	
D9804	EZAEG2A50AX	OTHER FILTERS	
D9805	EZAEG2A50AX	OTHER FILTERS	
D9806	EZAEG2A50AX	OTHER FILTERS	
D9807	EZAEG2A50AX	OTHER FILTERS	
D9808	EZAEG2A50AX	OTHER FILTERS	
D9809	EZAEG2A50AX	OTHER FILTERS	
D9810	EZAEG2A50AX	OTHER FILTERS	
D9811	EZAEG2A50AX	OTHER FILTERS	
D9812	MAZ80560ML	DIODE ZENER CHIP 5.6V	
D9813	MA22F2000L	SMALL CAPACITY SILICON RECTIFIER DIODES	
D9814	MA22F2000L	SMALL CAPACITY SILICON RECTIFIER DIODES	

RESISTORS

Ref. No.	Part No.	Part Name & Description	Remarks
R9801	ERJ3GEYJ103V	MGF CHIP 1/16W 10K	
R9802	ERJ3GEYJ103V	MGF CHIP 1/16W 10K	
R9803	ERJ3GEYJ103V	MGF CHIP 1/16W 10K	
R9804	ERJ3GEYJ472V	MGF CHIP 1/16W 4.7K	
R9805	ERJ3GEYJ472V	MGF CHIP 1/16W 4.7K	
R9806	ERJ3GEYJ473V	MGF CHIP 1/16W 47K	
R9807	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R9808	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R9811	ERJ3EKF4701V	MGF CHIP 1/16W 4.7K	
R9812	ERJ3GEYJ103V	MGF CHIP 1/16W 10K	
R9813	ERJ3GEYJ103V	MGF CHIP 1/16W 10K	
R9814	ERJ3GEYJ102V	MGF CHIP 1/16W 1K	
R9815	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R9816	ERJ3GEYJ560V	MGF CHIP 1/16W 56	
R9818	ERJ3GEYJ103V	MGF CHIP 1/16W 10K	
R9821	ERJ3GEYJ390V	MGF CHIP 1/16W 39	
R9822	ERJ3GEYJ102V	MGF CHIP 1/16W 1K	
R9823	ERJ3GEYJ103V	MGF CHIP 1/16W 10K	
R9824	ERJ3GEYJ3R9V	MGF CHIP 1/16W 3.9	
R9825	ERJ3GEYJ3R9V	MGF CHIP 1/16W 3.9	
R9826	ERJ3GEYJ3R9V	MGF CHIP 1/16W 3.9	
R9827	ERJ3GEYJ3R9V	MGF CHIP 1/16W 3.9	
R9828	ERJ3GEYJ3R9V	MGF CHIP 1/16W 3.9	
R9829	ERJ3GEYJ3R9V	MGF CHIP 1/16W 3.9	
R9830	ERJ3GEYJ3R9V	MGF CHIP 1/16W 3.9	
R9831	ERJ3GEYJ3R9V	MGF CHIP 1/16W 3.9	
R9832	ERJ3GEYJ472V	MGF CHIP 1/16W 4.7K	
R9840	ERJ3GEYJ560V	MGF CHIP 1/16W 56	
R9841	ERJ3GEYJ560V	MGF CHIP 1/16W 56	
R9850	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R9851	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R9852	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R9853	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R9854	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R9855	ERJ3GEYJ181V	MGF CHIP 1/16W 180	
R9856	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R9857	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R9858	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R9859	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R9860	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R9861	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R9862	ERJ6GEY0R00V	MGF CHIP 1/10W 0	
R9863	ERJ3GEYJ181V	MGF CHIP 1/16W 180	
R9864	ERJ3GEYJ181V	MGF CHIP 1/16W 180	
R9865	ERJ3GEYJ181V	MGF CHIP 1/16W 180	
R9866	ERJ3GEYJ181V	MGF CHIP 1/16W 180	
R9867	ERJ3GEYJ181V	MGF CHIP 1/16W 180	
R9876	ECJ1VC1H470J	C CHIP 50V 47PF	
R9878	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R9879	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R9880	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R9881	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R9882	ERJ3GEYJ473V	MGF CHIP 1/16W 47K	
R9888	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R9889	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R9896	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R9897	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R9898	ERJ3GEY0R00V	MGF CHIP 1/16W 0	

CAPACITORS

Ref. No.	Part No.	Part Name & Description	Remarks
C9801	F1H1E104A030	C CHIP 25V 0.1UF	
C9802	F1H1E104A030	C CHIP 25V 0.1UF	
C9805	F2G0J2200006	ELECTROLYTIC CHIP 6.3V 22UF	
C9806	F1H1E104A030	C CHIP 25V 0.1UF	
C9807	F1H1C104A065	C CHIP 16V 0.1UF	
C9808	F1H1C104A065	C CHIP 16V 0.1UF	
C9809	F1H1C104A065	C CHIP 16V 0.1UF	
C9810	F1H1C104A065	C CHIP 16V 0.1UF	
C9811	F1H1C104A065	C CHIP 16V 0.1UF	
C9812	F1H1C104A065	C CHIP 16V 0.1UF	
C9813	F1J1A106A024	C CHIP 10V 10UF	
C9814	F1H1C104A065	C CHIP 16V 0.1UF	
C9815	ECJ1VB1H103K	C CHIP 50V 0.01UF	
C9816	ECJ1VB1H103K	C CHIP 50V 0.01UF	
C9817	ECJ1VB1H103K	C CHIP 50V 0.01UF	
C9818	ECJ1VB1H103K	C CHIP 50V 0.01UF	
C9819	ECJ1VB1H103K	C CHIP 50V 0.01UF	
C9820	ECJ1VB1H103K	C CHIP 50V 0.01UF	
C9830	EEE0JA470SR	ELECTROLYTIC 6.3V 47UF	
C9831	F1H1C104A008	C CHIP 16V 0.1UF	

COILS

Ref. No.	Part No.	Part Name & Description	Remarks
L9801	J0JHC0000045	EMI FILTER CHIP	
L9804	J0JHC0000045	EMI FILTER CHIP	
L9805	J0JHC0000045	EMI FILTER CHIP	
L9806	J0JHC0000031	EMI FILTER CHIP	
L9807	J0JHC0000031	EMI FILTER CHIP	
L9809	J0JHC0000031	EMI FILTER CHIP	

PIN HEADERS

Ref. No.	Part No.	Part Name & Description	Remarks
CN9801	K1NA09E00078	SD UNIT	
CN9802	K1KA12AA0105	CONNECTOR 12P	
CN9803	K1FA119E0002	HDMI JACK SOCKET	
CN9804	K1KA30AA0009	CONNECTOR 30P	

MISCELLANEOUS

Ref. No.	Part No.	Part Name & Description	Remarks
403	XTV3+8FFJK	TAPPING SCREW,STEEL	
452	XTV3+8FFJ	TAPPING SCREW,STEEL	
710	LSMP0559-1	SD SHIELD CASE	
711	LSMP0558	SD SUPPORT ANGLE	
712	LSMC0161	SD EARTH SPRING	
713	K1PY30Y00005	HDMI INTERNAL HARNESS	
714	LSJA0629	SD-MAIN HARNESS	

15.3.4. POWER P.C.B.

INTEGRATED CIRCUITS

Ref. No.	Part No.	Part Name & Description	Remarks
IC1001	C0DACYY00003	IC, LINEAR	⚠
IC1002	CNC1S101R1KT	IC, LINEAR	⚠
IC1003	C0DAEZZ00003	IC, LINEAR	

TRANSISTORS

Ref. No.	Part No.	Part Name & Description	Remarks
Q801	2SD1819AHL	TRANSISTOR SI NPN CHIP	
Q803	2SD1819AHL	TRANSISTOR SI NPN CHIP	
Q804	2SD1819AHL	TRANSISTOR SI NPN CHIP	
Q805	2SD1819AHL	TRANSISTOR SI NPN CHIP	
Q806	2SD1819AHL	TRANSISTOR SI NPN CHIP	
Q1001	B1AAGD000016	TRANSISTOR SI NPN	

DIODES

Ref. No.	Part No.	Part Name & Description	Remarks
D801	ERZV10V361CS	SURGE ABSORBER 360V	⚠
D802	B0EDKT000009	DIODE SI CHIP	⚠
D807	B0HAJL000001	DIODE SI	
D808	B0HAJL000001	DIODE SI	
D809	B0EAKP000012	DIODE SI	
D811	MA3X152E0L	DIODE SI CHIP	
D814	MAZ42700MF	DIODE ZENER 27V	
D852	B0EAKP000012	DIODE SI	
D1001	B0EBNT000008	DIODE SI	⚠
D1002	MAZ71200BC	DIODE ZENER 12V	⚠
D1003	B0HAJL000001	DIODE SI	
D1004	MAZ73000BC	DIODE ZENER 300V	⚠
D1006	B0EAKV000052	DIODE SI	
D1007	B0HAJL000001	DIODE SI	
D1008	B0JCME000041	DIODE SI CHIP	
D1009	MAZ40910HF	DIODE ZENER 9.4V	
D1010	B0JBSK000017	DIODE SI	
D1011	B0JBSK000017	DIODE SI	
D1012	B0HAJL000001	DIODE SI	
D1015	MAZ41600MF	DIODE ZENER 16V	
D1016	MAZ41300MF	DIODE ZENER 13V	
D1017	MAZ43000MF	DIODE ZENER 30V	

RESISTORS

Ref. No.	Part No.	Part Name & Description	Remarks
R801	D0AF825KA002	CARBON 2/2W 8.2M	⚠
R806	ERDS1TJ100T	CARBON 1/2W 10	
R807	ERJ6GEYJ562V	MGF CHIP 1/10W 5.6K	
R808	ERJ6GEYJ272V	MGF CHIP 1/10W 2.7K	
R811	ERJ6GEYJ103V	MGF CHIP 1/10W 10K	
R812	ERJ6GEYJ103V	MGF CHIP 1/10W 10K	
R813	ERA3YED222V	MGF CHIP 1/16W 2.2K	
R818	ERJ6ENF1502V	MGF CHIP 1/10W 15K	
R820	ERJ6GEYJ104V	MGF CHIP 1/10W 100K	
R821	ERJ6GEYJ103V	MGF CHIP 1/10W 10K	
R822	ERJ6GEYJ104V	MGF CHIP 1/10W 100K	
R823	ERJ6ENF1502V	MGF CHIP 1/10W 15K	
R826	ERJ6GEYJ272V	MGF CHIP 1/10W 2.7K	
R827	ERJ6GEYJ562V	MGF CHIP 1/10W 5.6K	
R1001	ERJ6GEYJ103V	MGF CHIP 1/10W 10K	
R1005	ERJ6ENF2202V	MGF CHIP 1/10W 22K	
R1006	ERX2SZJR10P	METAL FILM 2W 0.1	
R1007	ERJ6GEY0R00V	MGF CHIP 1/10W 0	
R1008	ERJ6GEYJ562V	MGF CHIP 1/10W 5.6K	
R1009	ERDS1TJ330T	CARBON 1/2W 33	
R1010	ERJ6ENF1802V	MGF CHIP 1/10W 18K	
R1011	ERD25FJ100P	CARBON 1/4W 10	⚠
R1012	ERJ6GEYJ102V	MGF CHIP 1/10W 1K	
R1013	ERJ6GEYJ152V	MGF CHIP 1/10W 1.5K	
R1014	ERJ6GEYJ102V	MGF CHIP 1/10W 1K	
R1016	ERDS2TJ392	CARBON 1/4W 3.9K	
R1017	ERA3YED561V	MGF CHIP 1/16W 560	
R1018	ERA3YED752V	MGF CHIP 1/16W 7.5K	
R1019	ERA3YED302V	MGF CHIP 1/16W 3K	
R1021	ERJ6GEY0R00V	MGF CHIP 1/10W 0	
R1022	ERDS1TJ151T	CARBON 1/2W 150	
R1023	ERDS2TJ153	CARBON 1/4W 15K	
R1024	ERDS2TJ562T	CARBON 1/4W 5.6K	
R1025	ERJ6ENF3300V	MGF CHIP 1/10W 330	
R1026	ERF7ZKR82	W FLMPRF 7W 0.82	⚠
R1027	ERDS2TJ562T	CARBON 1/4W 5.6K	

CAPACITORS

Ref. No.	Part No.	Part Name & Description	Remarks
C801	F1BAF102A087	CERAMIC 250V 1000UF	⚠
C802	F0CAF105A021	POLYESTER 3.5V 1UF	⚠
C804	ECA1CHG102B	ELECTROLYTIC 16V 1000UF	
C805	ECA1EHG102B	ELECTROLYTIC 25V 1000UF	
C806	F0CAF105A021	POLYESTER 3.5V 1UF	⚠
C807	F1BAF102A087	CERAMIC 250V 1000UF	⚠
C815	ECA1CM100B	ELECTROLYTIC 16V 10UF	
C851	F0CAF474A021	POLYESTER 3.5V 0.47UF	⚠
C1001	F0CAF104A021	POLYESTER 125V 0.1UF	⚠
C1002	ECEC2DP561BB	ELECTROLYTIC 200V 560UF	⚠
C1003	F1BAF102A087	CERAMIC 250V 1000UF	⚠

Ref. No.	Part No.	Part Name & Description	Remarks
C1004	ECJ1VB1H104K	C CHIP 50V 0.1UF	
C1005	ECJ1VC1H101J	C CHIP 50V 100PF	
C1008	ECJ2VB1H222K	C CHIP 50V 0.0022UF	
C1009	F1B3D222A010	CERAMIC 25V 2200PF	
C1010	F2A1V1010029	ELECTROLYTIC 35V 100UF	
C1011	ECJ2VB1H102K	C CHIP 50V 1000PF	
C1015	F2A1V331A800	ELECTROLYTIC 35V 330UF	
C1016	ECA1HHG470B	ELECTROLYTIC 50V 47UF	
C1017	F1H1A105A025	C CHIP 10V 1UF	
C1018	F2A1C3920011	ELECTROLYTIC 16V 3900UF	
C1019	F2A1C3920011	ELECTROLYTIC 16V 3900UF	
C1021	F2A1C3920011	ELECTROLYTIC 16V 3900UF	
C1022	ECEA1HKAR47	ELECTROLYTIC 50V 0.47UF	
C1023	ECJ1VB1H104K	C CHIP 50V 0.1UF	
C1025	F2A1V331A800	ELECTROLYTIC 35V 330UF	
C1026	ECJ1VB1H104K	C CHIP 50V 0.1UF	
C1027	ECJ1VB1H104K	C CHIP 50V 0.1UF	
C1028	ECJ1VB1H104K	C CHIP 50V 0.1UF	
C1029	ECJ1VB1H104K	C CHIP 50V 0.1UF	
C1030	ECJ1VB1H104K	C CHIP 50V 0.1UF	
C1031	ECJ1VB1H104K	C CHIP 50V 0.1UF	

COILS

Ref. No.	Part No.	Part Name & Description	Remarks
L802	G0B452L00001	COMMON-MODE LINE CHOKE COILS	⚠
L1001	G0B123K00004	LINE FILTER	
L1003	J0JKA0000015	FERRITE BEAD WITH LEAD	
L1004	J0JHB0000021	EMI FILTER CHIP	
L1007	J0JHC0000031	EMI FILTER CHIP	
L1009	J0JHC0000031	EMI FILTER CHIP	
L1010	J0JHC0000031	EMI FILTER CHIP	
L1011	J0JHC0000031	EMI FILTER CHIP	
L1012	J0JHC0000031	EMI FILTER CHIP	
L1013	J0JHC0000031	EMI FILTER CHIP	
L1014	J0JHC0000031	EMI FILTER CHIP	
L1015	J0JHC0000031	EMI FILTER CHIP	

PIN HEADERS

Ref. No.	Part No.	Part Name & Description	Remarks
CN804	K1KA02A00736	CONNECTOR 2P	
CN851	LSJA0644	POWER-RF POWER HARNESS	
CN1003	LSJA0645	POWER-MAIN HARNESS	

FUSE & PROTECTOR

Ref. No.	Part No.	Part Name & Description	Remarks
F801	K5D802AQ0004	FUSES, CAP TERMINAL TYPE	⚠
F1001	K5D632AQ0002	TRANSFORMER 125V 6.3A	⚠
PR1001	D4FA7R00A002	IC PROTECTOR 7A	⚠

RELAY

Ref. No.	Part No.	Part Name & Description	Remarks
RL801	K6B1CGA00055	MAGNET RELAYS (FOR PCB)	⚠
RL802	K6B1CGA00055	MAGNET RELAYS (FOR PCB)	⚠

TRANSFORMER

Ref. No.	Part No.	Part Name & Description	Remarks
T801	G4C2AAD00008	POWER SUPPLY TRANSFORMERS	⚠
T1002	ETS39AG4K5NC	TRANSFORMER SWITCHING	⚠

MISCELLANEOUS

Ref. No.	Part No.	Part Name & Description	Remarks
417	XYN3+K10FN	SCREW W/WASHER,STEEL	
434	XYN3+F10FJ	SCREW W/WASHER,STEEL	
716	LSSC0978	HEAT SINK	
721	EYF52BCY	FUSE HOLDER	
724	LSSC0766	HEAT SINK	

15.3.5. REAR JACK P.C.B.

INTEGRATED CIRCUITS

Ref. No.	Part No.	Part Name & Description	Remarks
IC2751	C0DBEKG00003	IC, LINEAR	
IC2753	C0DBEKG00003	IC, LINEAR	
IC2754	C0DBEKG00003	IC, LINEAR	
IC2756	C0BBBA000022	IC, LINEAR	
IC4101	AN15862A-VT	ICS FOR VIDEO / AUDIO	

TRANSISTORS

Ref. No.	Part No.	Part Name & Description	Remarks
Q2751	2SD1819AHL	TRANSISTOR SI NPN CHIP	
or Q2751	B1ABCF000020	TRANSISTOR SI NPN CHIP	
or Q2751	B1ABCF000112	TRANSISTOR SI NPN CHIP	
Q2752	2SD1819AHL	TRANSISTOR SI NPN CHIP	
or Q2752	B1ABCF000020	TRANSISTOR SI NPN CHIP	
or Q2752	B1ABCF000112	TRANSISTOR SI NPN CHIP	
Q2753	2SD1819AHL	TRANSISTOR SI NPN CHIP	
or Q2753	B1ABCF000020	TRANSISTOR SI NPN CHIP	
or Q2753	B1ABCF000112	TRANSISTOR SI NPN CHIP	
Q2754	2SD1819AHL	TRANSISTOR SI NPN CHIP	
or Q2754	B1ABCF000020	TRANSISTOR SI NPN CHIP	
or Q2754	B1ABCF000112	TRANSISTOR SI NPN CHIP	
Q2755	2SD0601A0L	TRANSISTOR SI NPN CHIP	
or Q2755	B1ABCF000011	TRANSISTOR SI NPN CHIP	
or Q2755	B1ABCF000106	TRANSISTOR SI NPN CHIP	
Q4101	2SB0709A0L	TRANSISTOR SI PNP CHIP	
Q4102	2SD0601A0L	TRANSISTOR SI NPN CHIP	
or Q4102	B1ABCF000011	TRANSISTOR SI NPN CHIP	
or Q4102	B1ABCF000106	TRANSISTOR SI NPN CHIP	
Q4103	2SD0601A0L	TRANSISTOR SI NPN CHIP	
or Q4103	B1ABCF000011	TRANSISTOR SI NPN CHIP	
or Q4103	B1ABCF000106	TRANSISTOR SI NPN CHIP	

RESISTORS

Ref. No.	Part No.	Part Name & Description	Remarks
R2753	ERJ3GEYJ563V	MGF CHIP 1/16W 56K	
R2754	ERJ3GEYJ473V	MGF CHIP 1/16W 47K	
R2755	ERJ3GEYJ563V	MGF CHIP 1/16W 56K	
R2756	ERJ3GEYJ103V	MGF CHIP 1/16W 10K	
R2757	ERJ3GEYJ563V	MGF CHIP 1/16W 56K	
R2758	ERJ3GEYJ472V	MGF CHIP 1/16W 4.7K	
R2759	ERJ3GEYJ563V	MGF CHIP 1/16W 56K	
R2760	ERJ3GEYJ182V	MGF CHIP 1/16W 1.8K	
R2761	ERJ3GEYJ101V	MGF CHIP 1/16W 100	
R2762	ERJ3GEYJ101V	MGF CHIP 1/16W 100	
R2763	ERJ3GEYJ101V	MGF CHIP 1/16W 100	
R2764	ERJ3GEYJ101V	MGF CHIP 1/16W 100	
R2768	ERA3YKD104V	MGF CHIP 1/16W 100K	
R2769	ERA3YED273V	MGF CHIP 1/16W 27K	
R2770	ERA3YKD124V	MGF CHIP 1/16W 120K	
R2771	ERA3YED273V	MGF CHIP 1/16W 27K	
R2774	ERJ3GEYJ274V	MGF CHIP 1/16W 270K	
R2776	ERJ3GEYJ682V	MGF CHIP 1/16W 6.8K	
R2777	ERA3YKD124V	MGF CHIP 1/16W 120K	
R2778	ERA3YED273V	MGF CHIP 1/16W 27K	
R2779	ERJ3GEYJ563V	MGF CHIP 1/16W 56K	
R2780	ERJ3GEYJ223V	MGF CHIP 1/16W 22K	
R2781	ERJ3GEYJ563V	MGF CHIP 1/16W 56K	
R2782	ERJ3GEYJ563V	MGF CHIP 1/16W 56K	
R2783	ERJ3GEYJ153V	MGF CHIP 1/16W 15K	

Ref. No.	Part No.	Part Name & Description	Remarks
R2784	ERJ3GEYJ183V	MGF CHIP 1/16W 18K	
R2785	ERJ3GEYJ103V	MGF CHIP 1/16W 10K	
R2786	ERJ3GEYJ102V	MGF CHIP 1/16W 1K	
R2787	ERJ3GEYJ274V	MGF CHIP 1/16W 270K	
R2788	ERJ3GEYJ102V	MGF CHIP 1/16W 1K	
R2789	ERJ3GEYJ154V	MGF CHIP 1/16W 150K	
R2790	ERJ3GEYJ103V	MGF CHIP 1/16W 10K	
R3501	ERJ3GEYJ750V	MGF CHIP 1/16W 75	
R3502	ERJ3GEYJ750V	MGF CHIP 1/16W 75	
R3503	ERJ3GEYJ750V	MGF CHIP 1/16W 75	
R3504	ERJ3GEYJ184V	MGF CHIP 1/16W 180K	
R3505	ERJ3GEYJ184V	MGF CHIP 1/16W 180K	
R3506	ERJ3GEYJ750V	MGF CHIP 1/16W 75	
R3507	ERJ3GEYJ184V	MGF CHIP 1/16W 180K	
R3508	ERJ3GEYJ184V	MGF CHIP 1/16W 180K	
R3510	ERJ3EKF75R0V	MGF CHIP 1/16W 75	
R3511	ERJ3EKF75R0V	MGF CHIP 1/16W 75	
R3512	ERJ3EKF75R0V	MGF CHIP 1/16W 75	
R3513	ERJ3GEYJ184V	MGF CHIP 1/16W 180K	
R3514	ERJ3GEYJ184V	MGF CHIP 1/16W 180K	
R3515	ERJ3EKF75R0V	MGF CHIP 1/16W 75	
R3516	ERJ3EKF75R0V	MGF CHIP 1/16W 75	
R3517	ERJ3EKF75R0V	MGF CHIP 1/16W 75	
R3518	ERJ3GEYJ184V	MGF CHIP 1/16W 180K	
R3519	ERJ3GEYJ184V	MGF CHIP 1/16W 180K	
R3521	ERJ3GEYJ184V	MGF CHIP 1/16W 180K	
R3522	ERJ3GEYJ184V	MGF CHIP 1/16W 180K	
R4103	ERJ3GEYJ221V	MGF CHIP 1/16W 220	
R4104	ERJ3GEYJ221V	MGF CHIP 1/16W 220	
R4106	ERJ3GEYJ221V	MGF CHIP 1/16W 220	
R4107	ERJ3GEYJ221V	MGF CHIP 1/16W 220	
R4108	ERJ3GEYJ221V	MGF CHIP 1/16W 220	
R4109	ERJ3GEYJ221V	MGF CHIP 1/16W 220	
R4110	ERJ3GEYJ221V	MGF CHIP 1/16W 220	
R4111	ERJ3GEYJ221V	MGF CHIP 1/16W 220	
R4112	ERJ3GEYJ221V	MGF CHIP 1/16W 220	
R4113	ERJ3GEYJ221V	MGF CHIP 1/16W 220	
R4114	ERJ3GEYJ221V	MGF CHIP 1/16W 220	
R4115	ERJ3GEYJ221V	MGF CHIP 1/16W 220	
R4116	ERJ3GEYJ221V	MGF CHIP 1/16W 220	
R4117	ERJ3GEYJ221V	MGF CHIP 1/16W 220	
R4120	ERJ3GEYJ221V	MGF CHIP 1/16W 220	
R4121	ERJ3GEYJ221V	MGF CHIP 1/16W 220	
R4122	ERJ3GEYJ104V	MGF CHIP 1/16W 100K	
R4123	ERJ3GEYJ102V	MGF CHIP 1/16W 1K	
R4124	ERJ3GEYJ102V	MGF CHIP 1/16W 1K	
R4125	ERJ3GEYJ221V	MGF CHIP 1/16W 220	
R4126	ERJ3GEYJ221V	MGF CHIP 1/16W 220	
R4134	ERJ3GEYJ823V	MGF CHIP 1/16W 82K	
R4135	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R4136	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R4137	ERJ3GEYJ104V	MGF CHIP 1/16W 100K	
R4139	ERJ3GEYJ221V	MGF CHIP 1/16W 220	
R4140	ERJ3GEYJ221V	MGF CHIP 1/16W 220	
R4141	ERJ3GEYJ102V	MGF CHIP 1/16W 1K	
R4142	ERJ3GEYJ473V	MGF CHIP 1/16W 47K	
R4143	ERJ3GEYJ274V	MGF CHIP 1/16W 270K	
R4144	ERJ3GEYJ105V	MGF CHIP 1/16W 1M	
R4145	ERJ3GEYJ101V	MGF CHIP 1/16W 100	
R4146	ERJ3GEYJ101V	MGF CHIP 1/16W 100	
R4147	ERJ6GEYJ101V	MGF CHIP 1/10W 100	
R4148	ERJ6GEYJ101V	MGF CHIP 1/10W 100	
R4149	ERJ6GEYJ184V	MGF CHIP 1/10W 180K	
R4150	ERJ6GEYJ184V	MGF CHIP 1/10W 180K	

CAPACITORS

Ref. No.	Part No.	Part Name & Description	Remarks
C2753	F1H1E104A030	C CHIP 25V 0.1UF	
C2754	F1H1E104A030	C CHIP 25V 0.1UF	
C2755	F1H1E104A030	C CHIP 25V 0.1UF	
C2756	F1H1E104A030	C CHIP 25V 0.1UF	
C2757	F1H1E104A030	C CHIP 25V 0.1UF	
C2758	F1H1E104A030	C CHIP 25V 0.1UF	
C2759	F1H1E104A030	C CHIP 25V 0.1UF	
C2760	F1H1E104A030	C CHIP 25V 0.1UF	
C2761	ECA1HHG470B	ELECTROLYTIC 50V 47UF	
C2765	ECA1HHG470B	ELECTROLYTIC 50V 47UF	
C2769	ECA1HHG470B	ELECTROLYTIC 50V 47UF	
C2774	ECA1HHG470B	ELECTROLYTIC 50V 47UF	
C2775	ECA1HHG470B	ELECTROLYTIC 50V 47UF	
C2776	ECA1HHG470B	ELECTROLYTIC 50V 47UF	
C3505	F2A1A4710030	ELECTROLYTIC 10V 470UF	
C4101	ECEA1CKA101	ELECTROLYTIC 16V 100UF	
C4103	F1H1A105A025	C CHIP 10V 1UF	
C4104	F1H1A105A025	C CHIP 10V 1UF	
C4105	F1H1E104A030	C CHIP 25V 0.1UF	
C4106	F1H1A105A025	C CHIP 10V 1UF	
C4107	F1H1A105A025	C CHIP 10V 1UF	
C4108	F1H1A105A025	C CHIP 10V 1UF	
C4109	F1H1A105A025	C CHIP 10V 1UF	
C4110	F1H1A105A025	C CHIP 10V 1UF	
C4111	F1H1A105A025	C CHIP 10V 1UF	
C4112	F1H1A105A025	C CHIP 10V 1UF	
C4113	F1H1A105A025	C CHIP 10V 1UF	
C4114	F1H1A105A025	C CHIP 10V 1UF	
C4115	F1H1A105A025	C CHIP 10V 1UF	
C4116	F1H1A105A025	C CHIP 10V 1UF	
C4117	F1H1A105A025	C CHIP 10V 1UF	
C4120	F1H1A105A025	C CHIP 10V 1UF	
C4121	F1H1A105A025	C CHIP 10V 1UF	
C4123	F1H1A105A025	C CHIP 10V 1UF	
C4124	F1H1A105A025	C CHIP 10V 1UF	
C4138	ECEA1CKA220	ELECTROLYTIC 16V 22UF	
C4139	F1H1A105A025	C CHIP 10V 1UF	
C4140	F1H1A105A025	C CHIP 10V 1UF	
C4141	F1J1A106A024	C CHIP 10V 10UF	

COIL

Ref. No.	Part No.	Part Name & Description	Remarks
L4101	J0JHC0000078	EMI FILTER CHIP	

PIN HEADERS

Ref. No.	Part No.	Part Name & Description	Remarks
CN2751	K1KA03AA0193	CONNECTOR 3P	
CN2752	K1KA03AA0193	CONNECTOR 3P	
CN2753	K1KA03AA0226	CONNECTOR 3P	
CN2754	K1KA03AA0225	CONNECTOR 3P	
CN3501	K1KA35BA0138	CONNECTOR 35P	
CN3502	K1KA06BA0061	CONNECTOR 6P	

JACKS

Ref. No.	Part No.	Part Name & Description	Remarks
JK3501	K1U413A00008	S-JACK SOCKET	
JK3502	K2HA306A0037	JACKS FOR SMALL SIGNAL (EQUIPMENT SIDE)	
JK3503	K2HA306A0037	JACKS FOR SMALL SIGNAL (EQUIPMENT SIDE)	
JK3504	K2HA306A0038	JACKS FOR SMALL SIGNAL (EQUIPMENT SIDE)	
JK3505	K2HA204A0051	JACKS FOR SMALL SIGNAL (EQUIPMENT SIDE)	
JK3506	K2HA306A0038	JACKS FOR SMALL SIGNAL (EQUIPMENT SIDE)	
JK3507	K2HA204A0051	JACKS FOR SMALL SIGNAL (EQUIPMENT SIDE)	
JK3509	K2HA204A0051	JACKS FOR SMALL SIGNAL (EQUIPMENT SIDE)	

15.3.6. TUNER P.C.B.

RESISTORS

Ref. No.	Part No.	Part Name & Description	Remarks
R8970	ERJ6GEYJ470V	MGF CHIP 1/10W 47	
R8971	ERJ6GEYJ470V	MGF CHIP 1/10W 47	
R8972	ERJ3GEYJ102V	MGF CHIP 1/16W 1K	

Ref. No.	Part No.	Part Name & Description	Remarks
R8973	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R8974	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
W8972	ERJ6GEY0R00V	MGF CHIP 1/10W 0	
W8973	ERJ6GEY0R00V	MGF CHIP 1/10W 0	
W8974	ERJ6GEY0R00V	MGF CHIP 1/10W 0	
W8975	ERJ6GEY0R00V	MGF CHIP 1/10W 0	
W8976	ERJ6GEY0R00V	MGF CHIP 1/10W 0	
W8977	ERJ6GEY0R00V	MGF CHIP 1/10W 0	
W8978	ERJ6GEY0R00V	MGF CHIP 1/10W 0	
W8979	ERJ6GEY0R00V	MGF CHIP 1/10W 0	
W8980	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
W8981	ERJ6GEY0R00V	MGF CHIP 1/10W 0	
W8982	ERJ6GEY0R00V	MGF CHIP 1/10W 0	

CAPACITORS

Ref. No.	Part No.	Part Name & Description	Remarks
C8970	F2A0J331B003	ELECTROLYTIC 6.3V 330UF	
C8971	F1H1C104A065	C CHIP 16V 0.1UF	
C8972	F1H1H102A219	C CHIP 50V 1000PF	
C8973	F2A0J331B003	ELECTROLYTIC 6.3V 330UF	
C8974	F1H1C104A065	C CHIP 16V 0.1UF	
C8975	ECJ1VB1H103K	C CHIP 50V 0.01UF	
C8976	F2A1H560B358	ELECTROLYTIC 50V 56UF	
C8977	ECJ1VC1H820J	C CHIP 50V 82PF	
C8978	ECJ1VC1H820J	C CHIP 50V 82PF	
C8979	ECJ1VC1H100C	C CHIP 50V 10PF	
C8980	F2A0J331B003	ELECTROLYTIC 6.3V 330UF	
C8981	F1H1C104A065	C CHIP 16V 0.1UF	
C8982	F1H1H102A219	C CHIP 50V 1000PF	
C8984	ECJ1VC1H101J	C CHIP 50V 100PF	

COILS

Ref. No.	Part No.	Part Name & Description	Remarks
L8970	J0JHC0000045	EMI FILTER CHIP	
L8971	J0JHC0000034	EMI FILTER CHIP	
L8972	J0JHC0000045	EMI FILTER CHIP	
L8973	J0JHC0000045	EMI FILTER CHIP	

PINHEADER

Ref. No.	Part No.	Part Name & Description	Remarks
CN8970	K1KA20A00331	CONNECTOR 20P	

MISCELLANEOUS

Ref. No.	Part No.	Part Name & Description	Remarks
TU8970	ENGE6601KF	TV TUNERS	
725	LSSC0996	ELECTROMAGNETIC WAVE ABSORPTION SHEET	
726	LSSC0997	ELECTROMAGNETIC WAVE ABSORPTION SHEET	